

Dental Assisting National Board, Inc. (DANB)
American Dental Assistants Association (ADAA)

Position Paper of the
ADAA/DANB Alliance

Addressing A Uniform National Model For The Dental Assisting Profession

September 2005



Dental Assisting National Board, Inc., Chicago, Illinois

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Section One: Overview and Purpose

Introduction

In November 2000, a joint committee of the American Dental Assistants Association (ADAA) and the Dental Assisting National Board, Inc. (DANB), known as the ADAA/DANB Alliance, initiated a four-phase study of dental assisting core competencies. The goal of the study was to rank dental assisting tasks from most basic to most complex and to classify these tasks into clearly delineated categories or task groupings, each associated with a pre-defined level of education, training, and experience. In classifying these tasks, the ADAA/DANB Alliance sought to create a unified set of definitions related to dental assisting tasks, career levels, and education/training/credentialing requirements and to lay the foundation for nationwide acceptance and recognition of a standardized national model for the dental assisting profession.

The definitions and recommendations emerging from the study will serve a number of purposes, including

- To protect the public by identifying standards in quality of care that may be deployed across all states and socio-economic environments
- To help state regulators understand current trends, opinions, and practices prevalent among oral healthcare professionals as they consider the enactment of new legislation, regulations, or administrative rules related to dental assisting, including reciprocal recognition of dental assisting credentials among states, in furtherance of their public protection obligations
- To assist in efforts to maximize the capacity of the oral healthcare services infrastructure and, thereby, maximize access to care for all U.S. residents by effecting improvements in dental team productivity and cost-efficiency
- To reinforce the idea of a viable career ladder for dental assistants, for the purpose of aiding in recruitment and retention of a qualified dental assisting workforce through enhancements in career mobility and job satisfaction
- To assist public health agencies in the identification of qualified dental assistants to assist dentists participating in volunteer programs and other public health initiatives designed to address shortfalls in capacity and disparities in access to care among various segments of the population

This paper will discuss factors affecting current dental assisting practice, report the findings of the DANB/ADAA Study to Define and Rank Core Competencies for Dental Assistants, and consider the implications of the study's findings as they relate to the profession of dental assisting, the delivery of oral healthcare services, and the health and welfare of the public.

About the ADAA

The American Dental Assistants Association (ADAA) is the national membership association for dental assistants. The ADAA is the oldest, largest group representing professional dental assistants; its members include clinical personnel (those working chairside with the dentist), dental assisting educators, and those on the business side of dentistry: the receptionist, of-

fice manager, practice manager, and those working behind the scenes in dental product sales and insurance. The mission of the ADAA is “to advance the careers of dental assistants and to promote the dental assisting profession in matters of education, legislation, credentialing and professional activities which enhance the delivery of quality dental health care to the public.”

Since its founding in 1923 and the adoption of its constitution in 1924, the motto of the ADAA has been “Education, Efficiency, Loyalty and Service,” and addressing these ideals has driven the Association from the beginning. These ideals are regularly and aggressively addressed through the many education and professional recognition programs fostered by the ADAA.

The ADAA sponsored the first table clinics for dental assistants beginning in 1926. From this modest beginning emerged a suite of educational programs that now includes round-table and platform presentations at major dental meetings throughout the country and a roster of home study opportunities nearing the 100 mark. The ADAA has continued to develop and present quality education of its own creation, while also partnering with commercial and professional organizations to provide ever-expanding opportunities for dental assistants to develop and enhance their professional expertise.

The ADAA issues a number of publications, including *The Dental Assistant*, a journal begun in the 1920’s by the New York Dental Assisting Society, the publication of which was later assumed by the ADAA. Published continuously since then, *The Dental Assistant* offers educational articles, home study courses, and news related to the Association and the dental assisting profession. It is joined by two ADAA specialty publications: the *Student Newsletter* and the *Educators’ Newsletter*.

Education and professional recognition are jointly served by the ADAA’s Fellowship and Mastership programs, which provide special recognition for proven experience, education, and community contributions credited to ADAA members of more than three years’ standing. This program relies heavily on the recognition of Certification conferred by the Dental Assisting National Board, Inc. (DANB) and state registration in some states in developing credit towards the awarding of a Fellowship.

In addition, recognition for all dental assistants is provided each year through the international Dental Assistants Recognition Week program, jointly sponsored by the ADAA, the American Dental Association, the Canadian Dental Assistants Association, and the Canadian Dental Association.

About DANB

The Dental Assisting National Board, Inc. (DANB) is the national certification and credentialing agency for dental assistants. Since its inception in 1948, DANB has worked within and has had the support of the dental community. The American Dental Association recognizes DANB as the national certification agency for dental assistants. This recognition is supported by the Academy of General Dentistry, the Academy of Oral and Maxillofacial Radiology, the American Academy of Dental Practice Administration, the American Association of Dental Examiners, the American Dental Education Association, and the ADAA.

Dental assistants who meet the eligibility and examination requirements may earn certification in one or more of the following areas:

- Certified Dental Assistant – CDA®
- Certified Dental Practice Management Administrator – CDPMA®
- Certified Orthodontic Assistant – COA®

In addition to these three national credentials, DANB offers competency examinations in dental radiographic safety and technique—the Radiation Health and Safety (RHS) Exam—and in infection control principles and procedures—the Infection Control Exam (ICE). Passing each of these examinations allows a dental assistant to demonstrate knowledge-based competency in these respective areas, which are very important to the health and safety of oral healthcare workers and patients alike. The RHS and ICE examinations are components of the CDA Exam. ICE is also a component of the COA Exam.

From 1985 to 2000, DANB also administered an examination for dental assistants who assist oral surgeons—the Certified Oral and Maxillofacial Surgery Assistant (COMSA) Examination. DANB discontinued the COMSA Exam in 2000, because DANB determined that COMSA Exam candidate numbers were insufficient to ensure statistical validity of exam results on an ongoing basis. Since September 2004, DANB has been working with the American Association of Oral and Maxillofacial Surgeons (AAOMS) to survey stakeholders, including oral and maxillofacial surgeons and oral and maxillofacial surgery assistants, to determine if there is an interest in and support within these stakeholder communities for the creation of a new credentialing examination for oral and maxillofacial surgery assistants. The AAOMS is expected to consider the results of these surveys and to make a determination with regard to collaboration with DANB in the establishment of a new oral surgery assistant credential at its upcoming annual meeting in September 2005.

DANB was formed in 1948 as the American Dental Assistants Certification Board, Inc., a nonprofit agency initially established by the ADA for the purpose of “advancing the vocation of dental assistants by providing qualifying examinations.” Over time, the structure, composition, and name of the Board changed in response to a national movement within the healthcare community to ensure the independence of healthcare certifying agencies from organizations representing the interests of the professionals whose competency the agency tests and assures. In 1978, the American Dental Assistants Certification Board was re-formed as the Dental Assisting National Board, or DANB, and was incorporated as an independent nonprofit corporation.

Today, DANB's mission is “to promote the public good by providing credentialing services to the dental community. DANB accomplishes and measures the success of this mission through:

- A properly governed, financially secure, administratively sound organization;
- Valid dental assisting exams;
- Dental assisting recertification process integrity;
- Visible, valuable, and accessible DANB credentials;
- Testing services for groups within the oral healthcare community; and
- Information services for the oral healthcare community related to dental assisting credentialing and recertification.”

In the early 1980's, DANB applied for and received accreditation for its Certification programs from the National Commission for Certifying Agencies (NCCA – formerly the National Commission for Health Certifying Agencies), the accrediting body of the National Organization for Competency Assurance (NOCA). Since that time, DANB has maintained continuous accreditation of its national Certification programs: the Certified Dental Assistant (CDA), Certified Orthodontic Assistant (COA), and Certified Dental Practice Management Administrator (CDPMA) Examinations, including the Radiation Health and Safety (RHS), Infection Control (ICE), General Chairside (GC), and Orthodontic Assisting (OA) component exams. The accreditation of each of these DANB credentials means that the NCCA has found that these programs meet NCCA's highest standards, thus helping to assure validity, reliability, and objectivity in the testing and credentialing process.

The current composition of the DANB Board of Directors is as follows: three members representing the ADAA, two members representing the American Dental Association (ADA), one member representing the American Dental Education Association (ADEA), one member representing the American Association of Dental Examiners (AADE), one DANB Certificant elected by his or her peers, and one member who is not from any of these groups, representing the general public.

About the ADAA/DANB Alliance

In 2000, the ADAA and DANB formed a joint committee, the ADAA/DANB Alliance (formerly the ADAA/DANB Ad Hoc Committee to Enhance the Dental Assisting Profession), for the purpose of pooling the talents and expertise of both organizations to work on projects serving the dental assisting community and the public. The mission of the ADAA/DANB Alliance is “to come together to advance the dental assisting profession and to enhance the delivery of oral health care by presenting a united and strengthened voice that reflects all careers within dental assisting.”

At its first organizational meeting, the ADAA/DANB Alliance established for itself a set of goals, among which were “to conduct research to determine the needs of the dental assisting profession at the grassroots level” and “to move toward mandatory education and credentialing for dental assistants.” These goals support the missions of both organizations.

In November 2000, the ADAA/DANB Alliance defined and outlined the parameters of a project that would identify and rank core dental assisting competencies. The project's purpose was based on the assessment that “to protect the public and improve patient access to oral health care, dental assistants should have the education appropriate for and be able to demonstrate competency in the services delivered.” The ADAA/DANB Alliance developed descriptions of four levels of dental assistants, from entry level to the expanded functions level, and outlined the education, training, and experience presumed to be required for each level; the ADAA/DANB Alliance further developed a list, based on multi-phased research, of the most common dental assisting tasks, or the “core competencies” for dental assistants, beginning with basic support functions and moving to more advanced chairside procedures performed under the supervision of a licensed dentist.

In Winter 2001, the ADAA/DANB Alliance further refined the core competencies work, setting forth three specific purposes and two primary audience groups.

The specific purposes were defined as follows:

1. To provide empirical evidence of dental assisting competencies from basic to advanced in nature
2. To recommend minimum requirements for performing these competencies
3. To define and reinforce the notion of a viable career ladder for dental assistants

The ADAA/DANB Alliance determined that it would serve the public interest to disseminate information on the results of its research as follows:

1. Proactively, to federal-level health agencies (such as the Office of the Surgeon General and the U.S. Department of Health and Human Services), state boards of dentistry, state dental associations, organized dentistry (i.e. professional membership organizations representing various groups of dental professionals), oral health advocacy groups (such as Oral Health America), dental-related corporations, dental schools and dental assisting programs accredited by the ADA's Commission on Dental Accreditation, other dental assisting programs (not ADA-accredited), high school vocational education coordinators, and other groups (policymakers, public health organizations) as appropriate.
2. On request, to members of the oral healthcare team (and to dentists in particular), high school career counselors, consumers, and to others not already listed.

Section Two: History and Background

General Information About Credentialing

A “credential” is a document attesting to the qualifications and/or competency of a person or entity in a particular area of endeavor. The term “credentialing” is a broad term that encompasses the more specific concepts of accreditation, certification, licensure, and registration.

Significant attention is given in this paper to the topic of dental assistant credentialing. In discussing the credentialing of dental assistants, it is important to make note of the fact that credentialing terms are often misunderstood and misused by members of the various communities of interest, including lawmakers, regulators, oral healthcare researchers, and oral healthcare practitioner membership associations. The ADAA/DANB Alliance believes that incorrect or inconsistent use of credentialing terms, especially by policymakers, is a significant factor impeding the effectiveness of efforts to reach a national consensus with regard to the role of credentialing in the dental assisting profession.

A noteworthy example of a term that is used inconsistently in the oral healthcare field is “registration,” which is the term employed by a number of states to denote the credential required for dental assistants to work in those states and which has at least three meanings, as used by various state professional regulatory bodies. Registration can mean

- (1) the process by which a governmental agency grants a time-limited status on a registry, based on specific competency requirements (such as experience, education, and/or competency examination) authorizing those individuals to practice, similar to licensure;
- (2) a simple listing of practitioners maintained by a governmental agency, without educational, experiential, or competency examination requirements; or
- (3) a professional designation defined by a governmental entity in professional regulations or rules, without the centralized maintenance of a listing or registry of those who purport to meet registration requirements. In such cases, verification of eligibility and authentication of supporting documents are left to the registrant’s employers.¹

Of particular importance to the understanding of the recommendations emerging from the research conducted by the ADAA/DANB Alliance is the term “certification,” which the National Organization for Competency Assurance (NOCA) defines as follows:

Professional certification is the voluntary process by which a non-governmental entity grants a time-limited recognition and use of a credential to an individual after verifying that he or she has met predetermined and standardized criteria. It is the vehicle that a profession or occupation uses to differentiate among its members, using standards, sometimes developed through a consensus-driven process, based on existing legal and psychometric requirements. The holder of a professional certification is called a **certificant**.²

¹ National Organization for Competency Assurance. *The NOCA Guide to Understanding Credentialing Concepts*. (Washington, D.C.: NOCA, 2005) 5.

² *Ibid*, 5.

The CDA, COA, and CDPMA credentials conferred by DANB are examples of professional certification. Individuals holding these credentials are referred to in this paper as “Certified” or “DANB-Certified.” By contrast, the granting of a certificate upon completion of a particular course of didactic or clinical instruction is an example of a process that is sometimes incorrectly called “certification.” Individuals holding such certificates of completion are sometimes incorrectly referred to as “certified.”

In this paper, the ADAA/DANB Alliance uses the terms “credential,” “registration,” “certification,” and “licensure,” as they are defined and explained by NOCA in *The NOCA Guide to Understanding Credentialing Concepts*, published by NOCA in 2005. The ADAA/DANB Alliance endorses NOCA’s definitions of credentialing terms and urges all stakeholders involved in the discussion of a model for the dental assisting profession to standardize their use of these terms, so as to enhance mutual understanding of the discussion by all communities of interest.

The Current State of Dental Assisting Education, Credentialing, and Regulation

Regulation of the Practice of Dental Assisting

Currently, there is no nationally accepted set of guidelines that governs the practice of dental assisting in the United States. Each of the 50 states has a dental practice act governing the practice of dentistry, and the 50 dental practice acts define the allowable activities of dental assistants to varying degrees: Some state practice acts permit dental assistants to perform any reversible procedure, while others specifically enumerate the tasks that dental assistants are permitted to perform. Some states require registration, licensure, permits, or national certification before dental assistants can perform certain advanced or “expanded” functions, while others permit dentists to delegate tasks to any assistant whom they deem competent. In states where dental assistants are allowed to perform expanded functions, various levels of supervision by the dentist may be required. The regulations of a few states/districts do not address the practice of dental assisting at all. The spectrum of variation among the 50 states is very broad, and the lack of uniformity makes a state-by-state comparison of the dental assisting profession a time-consuming and labor-intensive proposition.

However, despite the lack of uniformity among the 50 states, certain generalizations about the dental assisting profession can be made, and certain trends can be identified. The dental practice acts and/or administrative rules of almost every state (49) explicitly or implicitly recognize dental assistants. Regulations in one state—Alaska—and in the District of Columbia do not address the practice of dental assisting, while those in two other states—Washington and Wisconsin—govern the delegation of duties to “unlicensed persons,” with the latter listing a significant number of traditional dental assisting duties as functions that may be delegated to “unlicensed persons.”

The dental practice acts and/or administrative rules of a majority of states (31) explicitly or implicitly recognize *more than one level* of dental assistant and restrict the performance of certain advanced functions to dental assistants who complete certain educational or clinical experience requirements or who hold certain credentials. This number has more than dou-

bled since 1993, when only 14 states recognized more than one category of dental assistant (excluding four additional states that had separate requirements for radiography).³

Table 2.1: Overview of State* Regulation of the Dental Assisting Profession

States/districts whose dental practice acts do not address the practice of dental assisting	2
States recognizing only one level of dental assistant	18
States recognizing at least two levels of dental assistant in their dental practice acts or rules	31
States requiring education, registration, national certification, licensing, or some type of credentialing to perform advanced or expanded functions (excluding radiography**)	33
States requiring education, registration, national certification, licensing, or some type of credentialing to perform dental radiography procedures	41
States that have enacted new legislation or adopted new administrative rules addressing the practice of dental assisting between 2000 and the present	11

* Includes District of Columbia

**The Consumer Patient Radiation Health and Safety Act of 1981 mandated that each state dental board enact requirements for education and testing for dental healthcare workers to expose radiographs. Many states that have enacted radiography requirements in response to this federal mandate have not enacted any requirements for the performance of other expanded functions. In addition, some states do not consider performing dental radiography procedures to be an expanded function.

A review of dental assisting rules and regulations reveals a trend among state dental boards toward recognition of more than one level of dental assisting. Typically, the first level of assistant may perform basic and intermediate tasks under the close supervision of a licensed dentist, while the second, more advanced level may perform advanced tasks and expanded functions—under some level of dentist supervision—after meeting minimum work experience requirements, completing formal education, and/or demonstrating competency on a state-specific or national knowledge-based competency examination.

Since 2000, at least 11 states have passed new legislation related to dental assisting or adopted new administrative rules governing the practice of dental assisting. Among these 11 states, eight have begun to allow the delegation of expanded functions to dental assistants, increased the list of delegable expanded functions, or enacted rules that more clearly define allowable delegation of expanded functions; four have increased or more clearly defined credentialing requirements; and, at least one state has passed legislation that specifically relaxes supervisory requirements for dental assistants working in an outreach setting as part of a program designed to improve access to care for underserved segments of the population. In addition, legislation or rules allowing or defining the delegation of expanded functions are currently being investigated or considered in five other states, and the addition or revision of education and/or credentialing requirements for dental assistants is currently being considered in 10 other states.⁴

The increase since 1993 in the number of states that recognize two or more levels of dental assisting and the increase since 2000 in the number of states enacting or considering rules related to the delegation of expanded functions to dental assistants reflect the oral health-care community's increasing interest in delegating expanded functions to dental assistants.

³ ADAA, "Position Paper of the ADAA Task Force to Investigate Mandatory Education and Credentialing for Dental Assistants" (Chicago: ADAA, 1994) Appendix B.

⁴ DANB, "DANB RHS in Ohio," *Certified Press* 1, no. 35 (2000): 1; "DANB Executive Director at the Illinois Board of Dentistry," *Certified Press* 1, no. 35 (2000): 5; State of the States, *Certified Press* 3, no. 38 (2002): 6; 4, no. 43 (2003): 7; 22, no. 1 (2004): 6; 22, no. 3 (2004): 6; 22, no. 4 (2004): 7; 23, no. 1 (2005): 7; 23, no. 2 (2005): 7; 23, no. 3 (2005): 5.

These trends also indicate that the oral healthcare and regulatory communities recognize that dental assistants who perform expanded functions should be competent and qualified to perform them and that it is necessary to establish and implement a means of measuring competency and/or verifying qualifications of these dental assistants.

DANB routinely receives communications from state dental boards seeking an overview of dental assisting rules and regulations in other states as these state regulatory bodies look to enhance access to care by expanding the list of functions that may be delegated to assistants, while also upholding their obligation to protect the public.

Dental Assisting Education

Prospective dental assistants may obtain dental assisting education from a number of different types of education sources:

- *ADA-Accredited Dental Assisting Programs*

The most prominent and widely recognized source of education for dental assistants is a dental assisting education program accredited by the ADA's Commission on Dental Accreditation. The Commission on Dental Accreditation is responsible for establishing standards for dental and dental-related education and for ensuring the quality of educational programs through adherence to the established standards. The ADA's Commission on Dental Accreditation is the only national body that specifically accredits dental assisting education programs.

There are currently about 265 dental assisting education programs that are accredited by the ADA's Commission on Dental Accreditation (also referred to herein as "ADA-accredited dental assisting programs"). In recent years, these programs have enrolled approximately 6,700–7,700 students per year nationwide and have graduated about 4,500–5,000 students per year collectively.⁵ The disparity between the number of enrollees and the number of graduates may be the result of a number of factors, including the enrollment of students whose life circumstances do not permit them to devote the time and attention needed to complete a dental assisting education program, as well as lenient admission requirements that attract students who are ultimately unable to succeed in these programs.

It is worthy of note that a large number of students use dental assisting education programs as a bridge or entry point into dental hygiene education and, therefore, do not enter the workforce as dental assistants. In fact, the sponsors and directors of a large number of these dental assisting programs market their programs as the first step in dental hygiene education and actively encourage students to enter dental hygiene programs after completion; such marketing strategies may be a contributing factor in the short supply of formally-educated dental assistants entering the workforce each year.

When compared to the number of dental assistants currently practicing nationwide, which is estimated by the Bureau of Labor Statistics to be about 266,000⁶, the collective capacity of ADA-accredited programs for dental assistants remains limited.

⁵ American Dental Association. *2002-2003 Survey of Allied Dental Education* (Chicago: ADA, 2004).

⁶ U.S. Department of Labor, Bureau of Labor Statistics. *Occupational Outlook Handbook, 2004-2005 Edition*, online version (Washington, D.C.: U.S. Department of Labor, 2005).

- *Dental Assisting Programs at Community and Vocational/Technical Colleges Not Accredited by the ADA's Commission on Dental Accreditation*

In addition to ADA-accredited programs, DANB and the ADA are aware of about 190 dental assisting programs that are not accredited by the ADA's Commission on Dental Accreditation, but are located in community colleges, vocational/technical schools, or other institutions accredited by other accrediting bodies recognized by the U.S. Department of Education (also referred to herein as "non-ADA-accredited dental assisting programs"). It is estimated that these programs enroll about 7,500 students per year collectively.⁷ Since many state dental boards do not accept education received outside of programs accredited by the ADA's Commission on Dental Accreditation for licensure as a dental hygienist, it is assumed that the majority of graduates from these non-ADA-accredited dental assisting programs move on to jobs in dental assisting.

- *Dental Assisting Programs Based in High Schools*

High schools with robust vocational education programs frequently make dental assisting vocational education available to their students. Some state dental boards, including those in Florida and Ohio, recognize education obtained through high school vocational education programs as a means by which dental assistants can meet the standards for licensure or registration in those states. Currently, high school dental assisting programs are not eligible for accreditation by the ADA's Commission on Dental Accreditation unless they are affiliated with a community college or other post-secondary institution.

- *Expanded Functions Courses Approved by State Dental Boards*

In a number of states, dental assistants are required to complete specific state dental board-approved training courses before they can perform certain advanced or expanded functions. Often, these training courses are offered within an ADA-accredited dental assisting education program and/or sponsored by state dental associations.

- *In-Office Training Courses Offered by Dentist-Employers*

Some dentists develop or arrange for in-office educational presentations, lectures, or demonstrations for dental assistants and other members of the dental team. For dental assistants who have not completed a formal dental assisting education program, these programs, though not monitored or standardized, may be their primary source of information about dental assisting practices and procedures.

⁷ Estimate based on a study by DANB, known as the Pilot Pathway IV Study, conducted in 2002-2003, in which students from dental assisting programs not accredited by the ADA's Commission on Dental Accreditation at institutions accredited by other agencies recognized by the U.S. Department of Education were permitted to sit for the CDA Exam, subject to completion of the educational program and a work experience requirement of six months. The results of this study indicated that graduates of these non-ADA-accredited programs passed the CDA Exam at a lower rate than graduates of ADA-accredited dental assisting programs ("CDA/GC Pilot Pathway IV Study Reviewed and Evaluated," *Certified Press* 22, no. 2 (2004): 6).

- *On-the-Job Training*

Capacity and geographic location have historically limited prospective dental assistants' access to dental assisting educational programs, as have the cost and time associated with attending and completing these programs. In addition, the fact that many states do not require any formal education for dental assistants may influence a prospective dental assistant's decision not to enroll in a formal dental assisting education program. Because of these factors, on-the-job training by licensed dentists has been and remains an important part of dental assisting education.

There is currently no nationally endorsed or accredited in-office training manual or process for dentists to use when training dental assistants on the job. In addition, there is no reliable means of verifying that on-the-job training of a dental assistant has been conducted by a licensed dentist rather than by another member of the dental team. It is estimated that at least 46% of dental assistants receive most or all of their education through on-the-job training.⁸

- *Continuing Dental Education Courses*

Dental assistants already employed in dental offices can maintain their competency through continuing dental education courses offered through local or state dental assisting membership organizations (such as local affiliates of the ADAA), home study courses (such as those published by the ADAA), and courses/lectures offered at dental conferences sponsored by local, state, regional, or national membership organizations for dentists, dental educators, and other dental professionals.

Dental assistants who engage in continuing education may do so because it is required by their dentist-employer, by state dental board rules, or by DANB (for maintenance of the CDA, COA, CDPMA, or COMSA credentials); dental assistants may also pursue continuing education out of a sense of personal responsibility and commitment to their professions, to meet a goal of earning Fellowship or Master-ship in the ADAA, or out of a desire to enhance their appeal in the job market.

A National Credential

Currently, the only measure of dental assisting competency that draws nationwide recognition and participation is the Certified Dental Assistant (CDA) credential that is conferred to dental assistants who pass the CDA Examination administered by DANB. The CDA Exam is made up of three components: Radiation Health and Safety (RHS), Infection Control (ICE), and General Chairside Assisting (GC). These components may be taken all at once, or each component may be taken individually. A candidate must pass all three components within five years to earn the CDA credential.

DANB is recognized by the American Dental Association as the national credentialing agency for dental assistants, and its national certification programs—including the Certified Dental Assistant (CDA), Certified Orthodontic Assistant (COA), Certified Dental Practice Management Administrator (CDPMA) Examinations, and the RHS, ICE, GC, and Orthodon-

⁸ Estimate based on the average number of graduates from dental assisting programs accredited by the ADA's Commission on Dental Accreditation and those programs in institutions accredited by other agencies recognized by the U.S. Department of Education, multiplied by an average 11.4 years of working as a dental assistant, reflecting the average career span of a dental assistant employed by a private practitioner, as determined by the ADA in its 2003 Survey of Dental Practice (Chicago: ADA, 2005). This number is then subtracted from the Bureau of Labor Statistics estimate of the number of individuals employed as dental assistants (266,000) and the result is divided by the same number to yield the estimated percentage of dental assistants who are trained primarily or solely on the job.

tic Assisting (OA) component examinations—are accredited by the National Commission for Certifying Agencies (NCCA), the accrediting body of the National Organization for Competency Assurance (NOCA). Of the estimated 266,000 dental assistants currently practicing nationwide, approximately 31,000 are DANB-Certified, while an additional 100,000+ have passed one or both of the RHS and ICE components of the CDA Exam since 1997, when DANB first began keeping records pertaining to candidate volumes for individual component exams.

Although there are no national eligibility prerequisites to sit for the ICE and RHS component exams, a candidate must, in order to sit for the GC component exam or the full CDA Exam, meet the criteria of one of three eligibility pathways. All pathways require current CPR certification from one of a list of DANB-accepted CPR programs. Pathway I candidates must graduate from a dental assisting educational program that is accredited by the ADA's Commission on Dental Accreditation. Pathway II is for on-the-job-trained dental assistants who have graduated from high school and have at least 3,500 hours of dental assisting work experience accumulated over a period of 24 to 48 months. Pathway III is for candidates who have previously passed the CDA Exam but have allowed their CDA credential to lapse and for dentists educated in this country or abroad who wish to take the CDA Exam, some to work as dental assistants.

DANB has established each pathway's requirements after careful research and statistical analysis. In particular, Pathway II eligibility criteria were initially based on the results of a three-year study (completed in 1986) that compared the performance on the CDA Exam of on-the-job trained dental assistants to the performance of graduates of ADA-accredited dental assisting programs. The study revealed that on-the-job-trained assistants who had worked as dental assistants for at least two years (or at least 3,500 hours over a 24- to 48-month period) were able to pass the CDA Exam at a statistically equivalent rate to graduates of ADA-accredited programs.⁹ Annual statistical analysis has continued to uphold the equivalence of these two pathways in preparing candidates to demonstrate their competency in the field of dental assisting.

Currently, 34 states recognize or require successful performance on a DANB dental assisting exam (CDA, COA, or one or more component exams) for dental assistants to meet state regulations or as a prerequisite to performing expanded functions. In addition, DANB's CDA and RHS exams meet the Veterans Health Administration's requirement for designation as an expanded functions dental assistant, and DANB's CDA exam and its component exams have been approved for the GI to Jobs Program under the Montgomery GI Bill.

DANB requires that Certification be renewed annually: all Certificants, including CDAs, COAs, CDPMAs, and COMSAs,¹⁰ must complete, each year, 12 hours of continuing dental education (CDE) meeting the CDE guidelines established by DANB for recertification and must maintain current CPR certification to qualify for renewal of their Certification. Continuing education is recognized by competency assurance experts as an important measure for

⁹ When Pathway II was established initially, only dental assistants who had two years' continuous full-time work experience (equivalent to at least 3,500 hours) were permitted to sit for the CDA Exam through this pathway. Subsequent pilot studies supported the extension of CDA Exam eligibility under this pathway to dental assistants who had accumulated 3,500 hours of part-time (or a combination of full- and part-time) work experience over a period of 24 to 48 months.

¹⁰ Although the COMSA Exam was discontinued in 2000, DANB has continued to support renewal of the COMSA credential for Certificants who earned the credential before its discontinuation. The American Association of Oral and Maxillofacial Surgeons and DANB are currently considering the creation of a new oral surgery assistant credentialing examination.

maintaining the validity of a certificant's credential and is required in order to comply with the standards set forth by the NCCA for accreditation of certification programs.

Trends in the Dental Community

In recent years, the dental community has seen an active movement towards the creation of national clinical licensure exams for dentists and dental hygienists. Licensure for dentists and dental hygienists is governed at the state level, and each state currently requires both a written and a clinical examination. For both groups—dentists and dental hygienists—a national written examination exists that is developed and administered by the ADA's Joint Commission on National Dental Examinations and that meets all or part of the written examination requirement in most states. However, the clinical examination requirements have not, historically, been uniform among the 50 states.

Clinical examinations for dentists and dental hygienists are developed and administered by four regional boards: the Western Regional Examining Board (WREB), the North East Regional Board of Dental Examiners, Inc. (NERB), the Central Regional Dental Testing Service, Inc. (CRDTS), and the Southern Regional Test Agency, Inc. (SRTA). Currently, 41 states accept the clinical examination results of at least one of these four regional examining boards, with some cross-regional reciprocity of exam results, and nine states administer and accept only their own state-specific clinical examination for dentists and dental hygienists. Since 1998, the number of states that accept the results of more than one clinical dental examination has grown from eight to 30.¹¹

The American Dental Association (ADA) and other organizations concerned with the practice of dentistry have long been promoting the idea of adopting a national clinical examination that would meet the clinical examination requirement for licensure in all states and that would take the place of the various regional or state-specific exams that are currently in use. In response to a recommendation of the ADA's Council on Dental Education and Licensure issued in April 2004, the American Association of Dental Examiners convened a committee (the American Dental Licensing Examination Committee) for the purpose of developing a uniform clinical licensing exam for dentists, to be used nationwide. In early 2005, this committee incorporated as an independent agency known as the American Board of Dental Examiners (ADEX).

National clinical dental and dental hygiene exams have also been developed by the regional examining board of the western United States—the Western Regional Examining Board (WREB). The WREB clinical dental and dental hygiene exams are available nationally and continue to expand, while the ADEX dental and dental hygiene exams are nearing completion and are scheduled to be fully implemented in 2006 for the 2006 graduating class.¹² The remaining regional examining boards—CRDTS, SRTA, and NERB—are involved in varying degrees of collaboration with WREB and/or ADEX in the examination development and administration process.

¹¹ ADA. "2005 Report of the Council on Dental Education and Licensure to the ADA House of Delegates" (ADA: Chicago, 2005) 61.

¹² Ibid, 61.

Although acceptance of the national exams developed by ADEX and/or WREB by all 50 state dental boards is not guaranteed, there is widespread support in the dental community for the idea of national uniformity, and the communities of interest are actively working towards the goal of the eventual nationwide acceptance of a uniform *clinical* dental exam and a uniform *clinical* dental hygiene exam, to accompany the current nationwide acceptance of uniform *written* dental and dental hygiene examinations (though some states may use the National Board Dental Examination (Parts I and II) or the National Board Dental Hygiene Examination to fulfill just one component of that state's written examination requirement for dentists or dental hygienists). The ADA/DANB Alliance believes that, as the communities of interest consider the future of the dental assisting profession, it is important to make note of the trend toward nationwide standardization of clinical exams for other oral healthcare professionals, in addition to the current existence of uniform educational and written examination requirements for dentists and dental hygienists across all 50 states.

The ADA Task Force to Investigate Mandatory Education and Credentialing for Dental Assistants (1994)

In 1992, the ADA convened a task force to address a directive from the ADA Board of Trustees to "investigate the need for and feasibility of mandating education and credentialing for clinical dental assistants." The ADA Task Force consisted of nine ADA representatives, three ADA representatives, two DANB representatives, one AADE representative, one representative from the American Association of Dental Schools (the former name of the American Dental Education Association, the ADEA), and 10 special consultants from various dentistry-related fields. The Task Force worked from 1992 through 1994 to study the evolution of and trends in the dental assisting profession, to analyze resource materials addressing the practice of dentistry and dental assisting (with the help of independent consultants outside the dental profession), and to formulate conclusions and recommendations based on the findings of the Task Force. In 1994, the ADA published a position paper that reported the conclusion of the Task Force:

The consensus of the ADA Task Force to Investigate Mandatory Education and Credentialing for Dental Assistants is that mandatory education and credentialing could enhance the current system of dental health care delivery. In order to accomplish this goal, however, the Task Force concluded that a tremendous amount of dedication, cooperation and effort will be required by all communities of interest.¹³

The report of the Task Force further urged the ADA to pursue implementation of mandatory credentialing for dental assistants.

In addressing potential barriers to the realization of the goal of mandatory credentialing for dental assistants, the Task Force observed that access to ADA-accredited dental assisting education programs is limited and recommended that non-traditional education alternatives (e.g. distance learning) be investigated and developed. However, the Task Force also noted that alternative pathways exist for entry into the dental assisting field, including on-the-job training, and that on-the-job-trained dental assistants are eligible to challenge DANB's Certified Dental Assistant credentialing examination. The Task Force concluded, therefore, that mandatory credentialing is unlikely to create or exacerbate shortages of dental assistants.

¹³ ADA, "Position Paper," 20.

Rather, statistics suggest that formal training and credentialing tend to reduce turnover rates for dental assistants.¹⁴ A detailed discussion of the role of education and credentialing in retention of qualified dental assistants can be found later in this paper under the subheading “Dental Assistant Recruitment and Retention,” beginning on page 17.

Oral Health in America: A Report of the Surgeon General (2000)

In 2000, the U.S. Department of Health and Human Services published the report *Oral Health in America: A Report of the Surgeon General*. The report was the first-ever report by the U.S. Surgeon General on the state of oral healthcare in the United States, and its intent was “to alert Americans to the full meaning of oral health and its importance to general health and well-being.” While applauding the advances that have been made in oral healthcare and the general oral health of the U.S. population over the past 50 years, the report also highlighted disparities in access to care and laid the groundwork for an action plan to improve access to care for underserved segments of the population.

The area of the report that is most relevant to the question of dental assisting duties is the discussion of the capacity of the oral healthcare services infrastructure (that is, the number of dentists, allied dental personnel, time and facilities available to meet the anticipated demand for oral healthcare services). One concern that the report addresses is a possible future shortage of dentists brought on by a number of factors, including the closing of a number of dental schools in the last two decades, the rising cost of education and educational indebtedness for dentists, and the retirement of older dentists, among others. The report also identifies a number of factors, including education-related indebtedness, leading to an uneven distribution of dental practices and the favoring of higher income communities. Overall, the report identifies current shortfalls in capacity and foresees a reduction in capacity of the oral healthcare infrastructure in the future.

One area of inquiry that received little attention in the Surgeon General’s report but that has the potential to significantly impact the maintenance of the capacity of the oral healthcare infrastructure and that the current paper begins to address is the role of allied dental personnel, including dental assistants, in the provision of oral healthcare services. The performance of expanded duties or functions by qualified dental assistants, under appropriate supervision by dentist-employers, has the potential to improve dental office productivity and, thereby, to mitigate the effects of any regional or nationwide dentist shortage or dental practice maldistribution on the public.

Another area that merits further inquiry is a quantitative analysis of the potential reduction in patients’ out-of-pocket costs and the consequent improvement in the accessibility of oral healthcare services gained by permitting the delegation of a larger number of tasks to qualified dental assistants (under appropriate supervision by dentists or, where independent dental hygiene practice is permitted by law, under supervision of dental hygienists, if allowed), given that dental assistants’ time is associated with lower overhead costs for the dental practice.¹⁵

¹⁴ “Salary Survey Results Say CDAs Still Earning More,” *Certified Press* 22, no. 4 (2004): 1, 3.

¹⁵ Gordon Christensen, “Why expand the role of dental staff members?” *JADA* 132 (2001): 529-531.

Permitting dental assistants to perform advanced or expanded duties will not serve the public good unless a means exists for assessing the qualifications and competence of the individuals performing these tasks. Standardized competency assurance must be an essential component of any effort to improve the productivity of the dental team by permitting the delegation of extraoral and reversible intraoral tasks to dental auxiliaries, including dental assistants. Credentialing examinations—such as the National Board Dental Examination for dentists, the National Board Dental Hygiene Examination for dental hygienists, the regional dental and dental hygiene board clinical examinations, and the DANB CDA Exam for dental assistants—when developed in accordance with sound psychometric methods and principles, are the best and most expedient way of determining whether a candidate has met the minimum competency requirements of his or her profession. Currently, the DANB CDA Exam is the only professional certification examination that measures dental assisting knowledge and skills and that is recognized by the ADA and accredited by the NCCA.

Response to the Surgeon General’s Report

In response to the Surgeon General’s 2000 report, a coalition of public and private organizations, including membership associations for various professions within oral healthcare, state public health departments and agencies, and local and national health-related charitable foundations, among others,¹⁶ began work on identifying specific actions needed to alleviate the disparities in access to oral healthcare services among various segments of the population. In 2003, the work of this partnership network culminated in *A National Call to Action to Promote Oral Health* (also referred to herein as the *Call to Action*), a document setting forth a series of recommended actions that the communities of interest should take to promote and advance the oral health of the U.S. population.¹⁷

In general terms, the *Call to Action* set forth five primary categories of action required: changing perceptions of oral health among the population; overcoming barriers by replicating effective programs and proven efforts; building the science base underlying oral healthcare and accelerating the transfer of knowledge; increasing the oral health workforce’s diversity, capacity, and flexibility; and increasing collaborations among all stakeholder groups within the public and private sectors.

This DANB/ADAA position paper begins to address the role of dental assistants in the maintenance and enhancement of the oral healthcare workforce’s capacity and flexibility. In particular, the paper reports dental professionals’ ranking of dental assisting tasks from most basic to most complex, highlights the delegation of duties to dental assistants as a means of maximizing the productivity of the dental team, and makes recommendations as to the education, training, and credentials that should be required for dental assistants who perform such duties.

The working group responsible for the *Call to Action* found that “the concept of oral health as secondary and separate from general health is deeply ingrained in American consciousness.” The fact that the general public does not demand the same level of education, competency measurement, and credentialing for dental assistants that it does for other healthcare professionals both evidences this perception and contributes to its persistence. It is the

¹⁶ See Appendix 2 for a complete list of partnership network members.

¹⁷ U.S. Department of Health and Human Services. *A National Call to Action to Promote Oral Health*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and the National Institutes of Health, National Institute of Dental and Craniofacial Research. NIH Publication No. 03-5303, May 2003.

hope of the ADA/DANB Alliance that efforts to establish a nationally recognized set of guidelines for the dental assisting profession will have the ancillary effect of elevating the seriousness and importance of oral healthcare in the minds of the public.

The Need for a Uniform National Dental Assisting Model

In concert with recent efforts at the national level to mobilize the oral healthcare community for action in the service of improving the nation's oral and general health, the ADA/DANB Alliance recommends that the communities of interest—dentists, dental hygienists, dental assistants, state and federal regulators, public health organizations, and consumers of oral healthcare services—begin to give serious consideration to the adoption or support of a uniform national dental assisting model that will establish guidelines for the education, training, and credentialing of dental assistants.

Disparities in Oral Healthcare

A national dental assisting model has the potential to begin to address the disparities in oral healthcare that the Surgeon General's 2000 report highlights. Dental patients of all income levels in all areas of the country should be protected by the same assurances that oral healthcare professionals who perform tasks affecting patient health are properly qualified to perform the procedures that they have been assigned. The lack of uniformity with regard to dental assisting education, training, and credentialing requirements that currently exists among the 50 states can only contribute to the disparities in levels of oral health among various segments of the U.S. population.

Capacity of the Oral Healthcare Services Infrastructure

As we anticipate a future in which market conditions may strain the capacity of the oral healthcare infrastructure to serve the public, it is important to consider the ways in which the expansion of functions that may be delegated to qualified and properly supervised dental assistants can help maintain capacity. In the interest of public health and safety, policy-makers must ensure that the assistants to whom expanded duties are delegated have the education, training, experience and, if appropriate, the credentials necessary to perform these duties competently. The adoption of a national model will allow states to streamline the process of evaluating and enacting uniform regulatory measures with regard to education requirements, allowable tasks, and competency testing requirements for dental assistants.

Dental Assistant Recruitment and Retention

Efforts to prevent a decline in the capacity of the dental healthcare services infrastructure will require a greater focus on effective recruitment and retention of qualified dental assistants. According to a 1999 Workforce Needs Assessment Survey conducted by the American Dental Association (ADA), about 65% of dental assistants employed at the time of the survey had been with the dentist less than five years.¹⁸ In the same survey, about 65% of dentists reported feeling that the supply of qualified dental assistants (referred to as "chair-side assistants" in the survey) was inadequate¹⁹, and about 65% felt that a shortage of chair-side assistants in their practice led to difficulty in providing quality care to patients.²⁰

¹⁸ ADA. *Dental Health Policy Analysis Series: 1999 Workforce Needs Assessment Survey*. (Chicago: ADA, 1999) 25.

¹⁹ *Ibid*, 29.

²⁰ *Ibid*, 30.

Frequent turnover of dental assistants can cumulatively affect both the productivity of and the quality of care provided by each dental office, resulting in diminished overall capacity of the dental services infrastructure and diminished oral health for those affected.

National certification has been shown to have a mitigating effect on dental assistant turnover. A 2004 survey conducted by DANB revealed that Certified Dental Assistants (CDAs) remain in the dental assisting field an average of 14.4 years, which is approximately 31% longer than their non-Certified counterparts employed in private dental practices. In addition, CDAs stay with the same dentist-employer for an average of 8.6 years, which is about 39% longer than non-Certified dental assistants employed in private practice.^{21,22} The benefits that dental assistants gain from earning Certification—which may include recognition by employers, colleagues, and patients as a demonstrably competent professional, enhanced respect from colleagues and patients, a greater sense of accomplishment, increased earnings, and improved career mobility—may contribute significantly to retention of highly qualified dental assistants.

It is worth noting that the tendency of credentialing to promote retention of experienced personnel has also been observed in other healthcare auxiliary fields: a survey of certified nursing assistants conducted by Iowa City–based national testing company ACT, Inc. has demonstrated that individuals who attend additional education and earn additional credentials are more likely to view their jobs as a profession and are likely to stay in their respective fields longer than those for whom successive rungs of a career ladder are not available.²³ Furthermore, in a recent survey of Certified Pharmacy Technicians (CPhTs) sponsored by the Pharmacy Technician Certification Board, the author of the study suggests the implementation of a career ladder as a means of improving CPhTs' job satisfaction and mitigating discontent caused by uncertainty about the future and inadequate compensation.²⁴

Reciprocal Recognition Among States of Dental Assisting Credentials

Closely related to the question of recruitment and retention are questions of state-to-state reciprocity with regard to dental assisting credentials (that is, the mutual recognition or acceptance of dental assisting credentials between or among U.S. states). The interest among members of the dental community in reciprocity is fueled by two factors: (1) the mobility of the U.S. population, and (2) the prevalence of commuting across state lines for work.

Mobility of the U.S. Population

According to data obtained from the U.S. Census Bureau, about 2.7% of the population, on the average, has moved from one state to another every year for the last 10 years. Applying this average mobility rate to the dental assistant population, it might be supposed that about 7,200 dental assistants will move each year from one U.S. state to another. To put this number into perspective, it is only slightly less than the number of students (7,666) who were enrolled in dental assisting education programs accredited by the ADA's Commission on Dental Accreditation in 2002-2003. Therefore, we expect that migrant dental assistants will make up a significant portion of the dental assisting workforce each year.

²¹ "Salary Survey Results Say CDAs Still Earning More," *Certified Press* 22, no. 4 (2004): 1.

²² ADA. *2003 Survey of Dental Practice: Employment of Dental Practice Personnel*. (Chicago: ADA, 2005) 18.

²³ Gary Nolan, Research Director, ACT, Inc., personal correspondence with Cynthia C. Durley, DANB Executive Director, September 2004.

²⁴ Shane P. Desselle, "Survey of Certified Pharmacy Technicians in the United States: a Quality-of-Worklife Study," *Journal of the American Pharmacists Association* 45, no. 4 (2005): 458.

As noted previously, there is a significant lack of consistency in dental assisting requirements between and among the 50 states and the District of Columbia. Unproductive time that dental assistants spend obtaining new credentials when they change their state of residency instead of working in dental offices contributes to the overall shortfall in the capacity of the oral healthcare services infrastructure. In addition, dental assistants who move to a state that does not recognize their existing credentials may prefer not to undertake the task of obtaining credentials in their new state and may choose to leave the dental assisting field altogether, resulting in a loss to the oral healthcare community of capable personnel. Conversely, dentist-employers may choose to hire these newly transplanted dental assistants despite their lack of state-required credentials, and may therefore risk their licenses and, perhaps, the safety of their patients by failing to comply with state rules and regulations.

An established and recognized national model for dental assisting will facilitate the employment search for qualified dental assistants, will simplify the recruitment process by helping dentists identify qualified candidates who have moved from other states as they seek to fill vacant positions, and will help to prevent the loss of experienced dental assistants from the national pool of qualified dental assisting personnel.

Lack of a recognized national standard for dental assisting also limits the ability of dentists, public health agencies, and policymakers to provide incentives for dental assistants to move from areas of the country where there is a surplus of dental assistants to areas where there is a shortage. A nationally recognized dental assisting model will provide the flexibility needed to effect the voluntary redistribution of dental assistants in the future if such a measure should become necessary. As an example, the well-publicized shortage of nurses nationwide has given rise to an increase in the number of hospitals filling their nursing vacancies with “traveling nurses”—contract nurses who travel from hospital to hospital in different cities and states on temporary assignments.²⁵ The absence of a nationally recognized model for dental assistants precludes members of the dental profession from implementing similar creative solutions to mitigate current and future staffing shortages.

Prevalence of Interstate Commuting

Interstate commuting is another area that gives rise to concerns over state-to-state reciprocity. Of the 49 largest metropolitan statistical areas (MSAs) in the United States, as identified by the Office of Management and Budget, 14 include counties in neighboring states (for example, the New York metropolitan area includes counties in New York, New Jersey, Connecticut, and Pennsylvania). About 23% of the U.S. population lives in these 14 MSAs, or about 66 million people, of which about 32 million (representing about 11% of the total U.S. population) are employed.

If about 11% of the total population is exposed to some degree to interstate commuting opportunities, it can be estimated that as many as 29,000²⁶ of the 266,000 active dental assistants might be in positions to accept offers of employment in neighboring states. Currently, many of these dental assistants would not be able to avail themselves of the full range of available employment opportunities (or they would need to obtain additional education or credentials) because the education, training, or credentials required by a neighboring state are different from those required in the state where they currently live

²⁵ Julie Schmit, “Nursing shortage drums up demand for happy nomads,” *USA Today*, 8 June 2005, online edition.

²⁶ These numbers are estimates only and have not been adjusted to factor in the average nationwide commuting time and distance or to account for the distribution of dental practices among the 14 MSAs considered. Additionally, data on the percentage of the population living within commuting distance of neighboring states outside of these MSAs are not available.

and work. Additionally, many dental practices that are within commuting distances of neighboring states cannot currently draw from the full pool of talent in their areas because the state in which they are located prohibits dental assistants from becoming employed unless they obtain state-specific licenses, credentials, permits, or education.

Currently, a limited number of states do provide an expedited credentialing pathway for dental assistants who are already licensed, registered, or credentialed in other states. There are 29 states that recognize or require national credentials (DANB's RHS or CDA Exam) to allow dental assistants to perform dental radiography procedures; of these, eight also recognize state-specific radiography credentials earned in other states or allow a dental assistant applying for a state radiography credential to request recognition of a radiography credential earned in another state. In addition, 24 states currently recognize or require a national credential (DANB's CDA or COA Exam) to allow dental assistants to perform expanded functions; of these, seven also recognize state-specific credentials earned in other states or consider requests from dental assistants for evaluation of expanded functions credentials conferred by other states. In addition, two states that do not currently recognize or require DANB's CDA credential for performance of expanded functions will consider other states' credentials in connection with registration or permit applications of dental assistants relocating from other states.²⁷

In states that allow for recognition of other states' credentials in their dental practice acts, evaluation and comparison of such credentials are typically performed on a case-by-case basis. There is currently no nationally accepted standard or guideline on which to base a comparison of the substance of one state's dental assistant credentialing examination to that of another state, unless both states currently recognize DANB's national credentials or competency examinations. Again, any factor that delays or restricts a successful match between a dentist-employer and a qualified dental assistant has the potential to contribute to the capacity shortfalls that are occurring now and that, if not addressed, may significantly limit access to oral healthcare for some segments of the population in the future.

Transition of Military Personnel into the Civilian Workforce

Military dental specialists are one group of professionals who are directly affected by the lack of a nationally recognized model for the dental assisting profession. The U.S. government, under the Montgomery GI Bill, provides assistance to military personnel in transitioning into the civilian workforce. Men and women who have served in the armed forces may be eligible to receive government financial assistance to pay for college courses, vocational training, entrepreneurship education, and licensing and certification examinations.

Although DANB is an approved testing organization under the GI Bill, and GI Bill beneficiaries are eligible for reimbursement for the cost of DANB exams, men and women who have worked as allied dental professionals while serving in the armed forces and who do choose to become DANB-Certified cannot be certain that their credential will be recognized under state law in the state where they choose to reside after they end their military service. In states where the DANB CDA Exam or one or more of its component exams (GC, RHS, and ICE) meet the legal prerequisites for employment as a dental assistant or an expanded functions dental assistant, military personnel who have become DANB-Certified in the military will be eligible to enter the civilian workforce as dental assistants immediately.

²⁷ DANB, *DANB's State Fact Booklet, Volume 2* (Chicago: DANB, 2004).

However, in states where the DANB CDA Exam is not accepted and where state-specific education and examinations are required, these prospective dental assistants will need to delay their entry into the workforce until they can meet these additional requirements. Or, they may choose to enter another career altogether. A nationally accepted model for the dental assisting profession will simplify the entry of military allied dental personnel into the civilian workforce and will also enhance the dental community's ability to take advantage of the skills of these experienced and credentialed professionals.

In recent years, the U.S. Army has taken an increased interest in identifying the ways in which training and experience that servicemen and servicewomen receive in the Army correspond with civilian training and experience and how such training meets the eligibility requirements for civilian licensing and certification. In May 2002, the U.S. Army launched a web-based information system known as Army Credentialing Opportunities On-line (Army COOL) that helps enlisted soldiers learn what civilian certifications relate to their Military Occupational Specialties (MOS) and how they can obtain such certifications. The COOL site lists dental assisting among the professions that correspond with an Army MOS and provides information to soldiers about DANB Certification. In addition, DANB works with Defense Activity for Non-Traditional Educational Support (DANTES) to administer its Certification exams at military test sites around the globe.

The efforts of the Army and other branches of the military to provide access to civilian job opportunities for those who have served their country are to be commended. The ADA/DANB Alliance urges the civilian sector to do its part in facilitating this process as it pertains to dental assistants and believes that the acceptance of uniform national credentialing requirements will remove a significant impediment to the transition of military dental personnel into civilian dental assisting positions.

Availability of Jobs for Civilian Spouses of Frequently Relocated Military Personnel

Civilian spouses of military personnel comprise another group that may be significantly impacted by the establishment of a uniform national model for dental assisting. In 2005, the U.S. Department of Defense, with the assistance of an external consultant, conducted research into viable occupations for civilian spouses of military personnel who are frequently relocated. The researchers sought to identify occupations that would lend themselves to mobility and promote career development and that require a license or certification for employment. They analyzed the viability of five professions, dental assisting among them, as career options for military spouses in ten states heavily populated with military families: California, Florida, Georgia, Hawaii, Maryland, North Carolina, Tennessee, Texas, Virginia, and Washington.

The consultant to the Department of Defense approached DANB with a request to provide information about the dental assisting profession in general and about requirements for employment as a dental assistant in the ten states under examination specifically. In addition, the consultant sought assistance from DANB in identifying answers to the questions of how to encourage military spouses to consider dental assisting as a career and how to break down the barriers to employment as a dental assistant.

The consultant to the Defense Department has recommended that the ten states under consideration adjust their state-specific requirements to allow military spouses to work as dental assistants, provided that they are DANB-Certified, have completed an ADA-accredited dental assisting program, and have worked in other states as dental assistants without com-

plaints, convictions, or disciplinary incidents.²⁸ The Department of Defense study underscores the potential benefits of the establishment and acceptance of a uniform national dental assisting model, both for the dental assistant who must seek new employment when his or her spouse is relocated and for the oral healthcare community, which can better retain these qualified and experienced dental assistants within its ranks and is, consequently, better able to provide efficient and expedient care to the public.

Dental Assistants Working in the Community

The 2002 *Call to Action* that emerged as a response to the Surgeon General's 2000 report highlights the "lack of personnel with oral health expertise at all levels in public health programs" as a "serious problem," and calls for more public investment in developing oral health workforce personnel. The report sets forth the goal of "moving society toward optimal use of its health professionals" and calls for the enlistment of all healthcare professionals in local efforts to eliminate health disparities in America.

Credentialing is especially important for identifying dental assisting candidates to work on a volunteer basis or to participate in occasional rotations at community clinics or in outreach programs under appropriate levels of supervision. The working conditions inherent in a temporary or volunteer setting do not permit a licensed dentist who may be supervising a dental assistant for a limited time to expediently assess the skill level and competence of the dental assistant. In these cases, nationally recognized credentials can play an important role in identifying and recruiting qualified volunteer personnel and, thereby, ensuring that the inability to verify qualifications does not become a barrier to the expansion and success of public health initiatives.

Dental Assistants and the Emergency System for Advanced Registration of Volunteer Health Professionals

In June 2005, the U.S. Health Resources and Services Administration (HRSA) contacted DANB to request assistance in its efforts to develop a registry of health professionals who are willing to volunteer in the event of a natural or manmade disaster or bioterrorist attack. The development of this advanced registration system is mandated by federal law as part of planned and coordinated disaster and emergency response effort on a national scale and is known as the Emergency System for Advanced Registration of Volunteer Health Professionals (ESAR-VHP). The terrorist attacks of September 11, 2001, and the anthrax attacks that immediately followed increased the national attention given to public health emergency preparedness. These events, and periodic natural disasters such as Hurricane Katrina (8/29/05), underscore the need for an emergency "surge" or supplemental healthcare workforce that can be mobilized to respond immediately to a mass casualty event.

Along with other healthcare professionals, dental assistants will be included in the ESAR-VHP registry. DANB has begun work with HRSA to compile information on the various licenses, registrations, certifications, and other credentials required for or available to dental assistants. This information will be used in identifying appropriate content for registry entries that will help emergency responders verify the qualifications of volunteers. The registry's classification method will not only accelerate the call-up of volunteers and ensure that resources are dispatched expediently, but it will also become a national standard that will

²⁸ Beth Holst, Holst and Associates, L.L.C., consultant to the U.S. Department of Defense, personal correspondences with Cynthia C. Durley, DANB Executive Director, December 2004–April 2005.

facilitate the exchange of healthcare volunteers across state lines. This project is exceptionally relevant to the current discussion of a uniform national dental assisting model, because it underscores the need for and the benefit of a nationally accepted set of guidelines for the education and training of dental assistants and the need for a nationally recognized credential that can be used to verify the competency and qualifications of dental assistants.

In the current regulatory environment, which admits wide variation in dental assisting practice among the 50 states, one of the most difficult aspects of creating a national registry of qualified dental assistants is this: While the few states that currently *license* dental assistants maintain records of these licenses, many states that publish *registration* requirements for dental assistants actually do not maintain any records of these registered dental assistants, often referred to as “RDAs.” Instead, these state dental boards publish their requirements in regulation or rule and then expect that the dentist-employers will (1) be aware of these regulations as they apply to dental assistants, (2) require their dental assistant employees to provide them with documentation supporting their registered status, and (3) know how to recognize whether such documentation is authentic and meets the state’s requirements. These are time-consuming responsibilities that place an undue burden on already-busy practitioners.

Some Concerns Related to a Uniform National Model

Some dentists, dental associations, and state dental boards may express concern over the possibility that a uniform national model for dental assisting may lead to the imposition of regulations that are more restrictive or burdensome than those currently existing in their respective states, or that the introduction of mandatory education or credentialing requirements for dental assistants may have the effect of decreasing access to care, because such requirements may act as barriers that restrict entry into the dental assisting field.

These concerns are understandable and may, in fact, be true over the short term. However, the actual results of survey research conducted by DANB and other organizations, such as ACT, Inc., suggest that increased education and credentialing tend to promote long-term retention of qualified employees in a number of fields.^{29,30} In addition, establishing a recognized model for the dental assisting profession is likely to induce a larger number of intelligent and self-motivated individuals—individuals who might otherwise pursue careers in other fields, where identified career ladders and the resulting enhanced pay scales are available—to consider dental assisting as a career. The potential of a national set of guidelines for dental assistant education and credentialing to enhance recruitment efforts (by increasing the pool of demonstrably qualified dental assistants), in conjunction with enhanced retention, can be expected to offset any losses of underqualified dental assistants who are deterred from entering the field or who leave the field because they cannot or do not desire to obtain the necessary education or credentials.

A uniform national model for the dental assisting profession would also enable some dental practices to draw qualified dental assistants from neighboring states. Currently, the wide variation in dental assisting rules and regulations among the states may prohibit qualified dental assistants living within commuting distances of neighboring states to work legally in those states. By facilitating dental assistants’ movement across state lines, a uniform national model

²⁹ “Salary Survey Results Say CDAs Still Earning More,” *Certified Press* 22, no. 4 (2004): 1, 3.

³⁰ Gary Nolan, Research Director, ACT, Inc., personal correspondence with Cynthia C. Durley, DANB Executive Director, September 2004.

can be expected to augment rather than diminish the number of qualified dental assistants available for employment in many regions.

In addition, retaining experienced dental assistants for longer terms of employment and allowing the delegation of expanded functions to these qualified and credentialed assistants (under appropriate supervision by the dentist-employer) can greatly enhance productivity, leading ultimately to the safe and effective treatment of greater numbers of dental patients and consequent improvements in the collective oral and general health of the population.

The ADAA/DANB Alliance agrees that the question of regulation is not to be taken lightly, and that rules and regulations that are designed arbitrarily without regard to real-world dental office circumstances could have a deleterious effect on access to care. It is for this very reason that the ADAA/DANB Alliance has strived, through its study of dental assisting core competencies, to create a framework for a national model that is reflective of the views and judgments of a large number of oral healthcare professionals, including dental assistants, educators, and dentists.

The Foundation for a Uniform National Model

To date, the adoption of a standardized national model for dental assisting has appeared impracticable, because there has been no scientific or empirical foundation on which to base the definitions of various dental assisting designations and corresponding allowable functions. The research undertaken by the ADAA/DANB Alliance has had as its goal the establishment of a clear foundation on which a uniform national model for dental assisting tasks, career levels, and education/training/credentialing requirements should be based. Section Three of this paper will report the findings of the DANB/ADAA Study to Define and Rank Core Competencies for Dental Assistants and discuss the ways in which these results should be used to establish a national model for the dental assisting profession.

Section Three: DANB/ADAA Study to Define and Rank Core Competencies for Dental Assistants

Study Purpose

While the concept of a nationally accepted set of dental assisting tasks and levels has been under consideration by the communities of interest for some time, a formal study of dental assisting competencies from the perspective of “career ladder” development was not undertaken until 2000, when the ADAA/DANB Alliance was formed. One of the primary objectives of the ADAA/DANB Alliance was to define core dental assisting competencies and rank them in order, from most basic to most complex, for the purpose of providing the foundation on which a national set of accepted dental assisting tasks, career levels, and education/training/credentialing requirements could be based.

The ADAA/DANB Alliance reviewed previous qualitative studies on the practice of dental assisting, including the 1994 “Position Paper of the ADAA Task Force to Investigate Mandatory Education and Credentialing for Dental Assistants,” and determined that, in order to create a unified set of dental assisting tasks and definitions on which a national model could be based, quantitative research was needed to supplement the qualitative studies conducted earlier and to reinforce and support the recommendations emerging out of such studies. The ADAA/DANB Alliance determined that a survey of oral healthcare professionals—dentists, dental assistants, and dental assisting educators—would provide the empirical data needed for the classification and rank ordering of dental assisting tasks and the identification of training, education, and credentialing requirements appropriate for each classification level.

Survey Development and Distribution

DANB’s General Chairside Exam Committee³¹ developed the Core Competencies Survey during its Fall 2001 annual meeting based on task development groundwork accomplished by the ADAA/DANB Alliance in Fall 2000, using DANB’s *Task Analysis*³² as a reference point. The General Chairside Exam Committee consists of CDAs, educators, dentists, a DANB Board of Directors representative, and DANB’s psychometrician, with all oral healthcare content expert members on this Committee representing different areas of the country and possessing a mix of clinical and didactic work experience. Together these committee members developed the definitions for the different levels of dental assisting to be used in the survey. Additionally, the committee reviewed the ADAA/DANB Alliance’s list of major tasks performed by dental assistants of all levels and identified 70 tasks for use in the survey.

The surveys used in Phases I and II of the study listed the 70 tasks and asked the participants to rate each task in terms of training, education, and/or experience they believed should be required to perform the task. The survey participants were specifically instructed

³¹ DANB’s General Chairside Exam Committee is responsible for the development of content for the General Chairside (GC) component of the DANB CDA Examination.

³² DANB’s *Task Analysis* is a list of dental assisting functions used to determine the content areas of DANB Exams. The *Task Analysis* was synthesized from a number of dental assisting job analyses, and it lists tasks that were rated as to criticality, frequency of performance, and appropriateness for dental assistants by a large number of dental professionals. The *Task Analysis* was first completed in 1983 and has been revised and updated regularly (every three to five years, on average) to reflect changes in dental assisting practice and the results of validity studies.

that their responses should reflect their belief about what *should be required* rather than what currently *is required* in their state. Respondents assigned each task to one of four pre-defined categories of dental assisting: Entry Level, Dental Assistant, Certified/Registered Dental Assistant, and Expanded Functions Dental Assistant. The survey was distributed to CDAs working in dental practices and CDAs working as Program Directors of dental assisting education programs accredited by the ADA’s Commission on Dental Accreditation (Phase I of the study) and to dental assistants who were not CDAs (Phase II of the study).

Upon review of the survey instrument, the ADAA/DANB Alliance decided, for Phase III, to change the category names that had been used in Phases I and II for each of the four dental assistant levels to avoid a bias caused by preconceived meanings associated with these category names. In Phase III of the study, in which the survey was distributed to dentists, the list of tasks remained identical (with the exception of one revision), but the categories were renamed using generic identifiers (Category A, Category B, Category C, and Category D). In Phase IV, the revised survey with the generic category identifiers used in Phase III was redistributed to CDAs, Program Directors of ADA-accredited dental assisting programs, and dental assistants who are not CDAs, so that the responses from all four of these groups could be evaluated and compared within the same framework.

Table 3.1 shows the distribution and response rate of surveys mailed to each group in Phases III and IV.

Table 3.1: Response Statistics for Core Competencies Survey, Phases III and IV

Recipient Community (For each group, a random sample, stratified by state, was selected for participation.)	Surveys Sent	Surveys Returned	Response Rate
Dentists (ADA members)	5,000	544	11%
CDAs	2,500	728	29%
ADA-Accredited Dental Assisting Program Directors	236	112	41%
Non-CDAs*	2,500	24	< 1%

* In the case of dental assistants who are not CDAs, 2,500 postcards were mailed to dental offices in the hope of finding non-CDA dental assistants to participate in the survey. The number of non-CDAs who ultimately returned the survey was 24. It is unknown whether the low response rate is due to the failure of dental office personnel retrieving the mail to deliver the solicitation postcards to the dental assistants, or whether the non-CDA dental assistants chose not to participate in the survey for other reasons. Because of the small number of survey responses received from non-CDAs, the responses of this group are not included in the overall analysis.

Survey Content

Table 3.2 lists the 70 tasks that were used in Phases III and IV of the Core Competencies Survey.

Table 3.2: Survey Task List

1. Perform mouth mirror inspection of the oral cavity*	38. Monitor vital signs
2. Chart existing restorations or conditions	39. Clean and polish removable appliances and prostheses
3. Phone in prescriptions at the direction of the dentist*	40. Apply pit and fissure sealants
4. Receive and prepare patients for treatment, including seating, positioning chair, and placing napkin	41. Prepare procedural trays/armamentaria set-ups
5. Complete laboratory authorization forms*	42. Place orthodontic separators
6. Place and remove retraction cord	43. Size and fit stainless steel crowns
7. Perform routine maintenance of dental equipment*	44. Take preliminary impressions
8. Monitor and respond to post-surgical bleeding	45. Place and remove matrix bands
9. Perform coronal polishing procedures	46. Take final impressions
10. Apply effective communication techniques with a variety of patients*	47. Fabricate and place temporary crowns
11. Transfer dental instruments	48. Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.
12. Place amalgam for condensation by the dentist*	49. Perform vitality tests
13. Remove sutures	50. Place temporary fillings
14. Dry canals	51. Carve amalgams
15. Tie in archwires	52. Process dental radiographs
16. Demonstrate knowledge of ethics/jurisprudence/patient confidentiality	53. Mount and label dental radiographs
17. Identify features of rotary instruments	54. Remove temporary crowns and cements
18. Apply topical fluoride	55. Remove temporary fillings
19. Select and manipulate gypsums and waxes	56. Apply topical anesthetic to the injection site
20. Perform supragingival scaling	57. Demonstrate understanding of the Centers for Disease Control and Prevention Guidelines
21. Mix dental materials	58. Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants
22. Expose radiographs	59. Monitor nitrous oxide/oxygen analgesia
23. Evaluate radiographs for diagnostic quality	60. Maintain emergency kit*
24. Provide patient preventive education and oral hygiene instruction	61. Remove permanent cement from supragingival surfaces
25. Perform sterilization and disinfection procedures	62. Remove periodontal dressings
26. Provide pre- and post-operative instructions	63. Place post-extraction dressings
27. Place and remove dental dam	64. Fabricate custom trays, to include impression and bleaching trays, and athletic mouthguards
28. Pour, trim, and evaluate the quality of diagnostic casts	65. Recognize basic medical emergencies
29. Size and place orthodontic bands and brackets	66. Recognize basic dental emergencies
30. Using the concepts of four-handed dentistry, assist with basic restorative procedures, including prosthodontics and restorative dentistry	67. Respond to basic medical emergencies*
31. Identify intraoral anatomy	68. Respond to basic dental emergencies
32. Demonstrate understanding of the OSHA Hazard Communication Standard	69. Remove post-extraction dressings
33. Place, cure and finish composite resin restorations	70. Place stainless steel crowns
34. Place liners and bases	
35. Place periodontal dressings	
36. Demonstrate understanding of the OSHA Bloodborne Pathogens Standard	
37. Take and record vital signs	

* The tasks marked with an asterisk and shaded have been omitted from the final analysis because of “misfit” that was likely the result of inconsistent understanding of terms used in the task description. For a complete discussion of misfit, see the survey report in Appendix 1.

Dental Assisting Categories

Survey respondents for Phases III and IV were asked to assign each task in the foregoing list of 70 dental assisting tasks to one of the following four categories:

Category A: These are the most basic dental assisting tasks: No minimum experience, training, or education should be required to perform the task (though the task may require a short orientation in order to perform it); that is, in order to perform a Category A task, the assistant needs only to be provided with short, one-time verbal instructions or read a short instruction sheet.

Category B: These tasks are of low to moderate complexity, requiring less than 2 years full-time or up to 4 years part-time dental assisting work experience OR up to 12 months of formal education or training in order to perform this task. Tasks in Category B are appropriate for relatively new OJTs (on-the-job-trained dental assistants) and students currently enrolled in a formal dental assisting education program.

Category C: These tasks are of moderate complexity, requiring 2+ years of full-time or 4+ years of part-time work experience (or some combination of full- and part-time experience) OR at least 12 months of formal education or training. (Tasks in Category C are appropriate for dental assistants who have completed a formal dental assisting education program or who are highly experienced OJTs.)

Category D: These tasks are most complex. In order to perform Category D tasks, the dental assistant would require specific, advanced education or training in addition to or beyond the level required for Category C tasks.

Survey participants were instructed that their responses should reflect their belief about what *should be required* rather than what currently *is required* in their state.

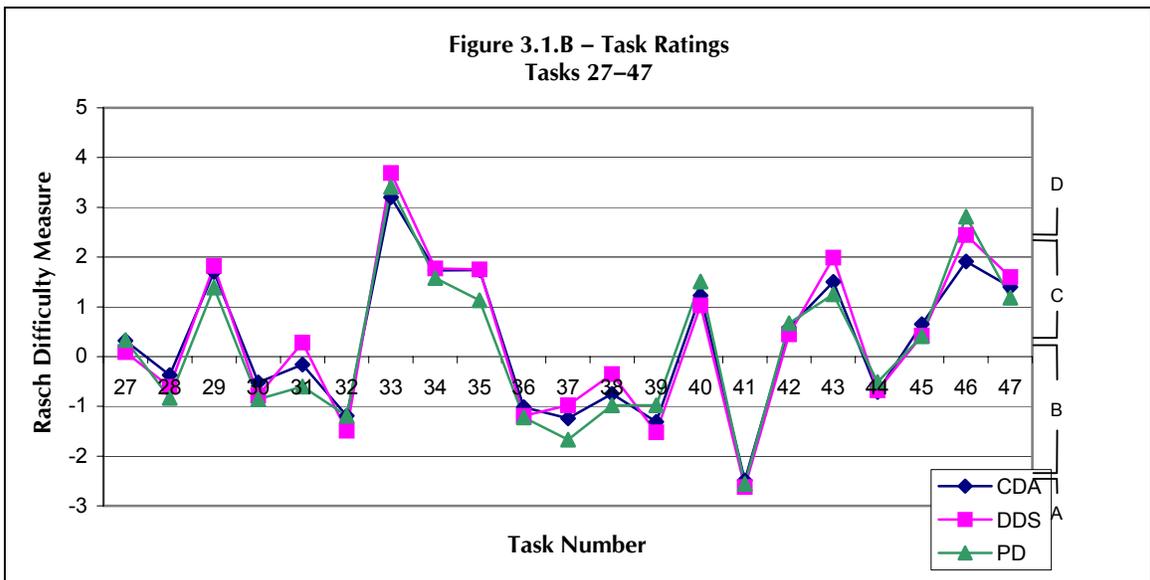
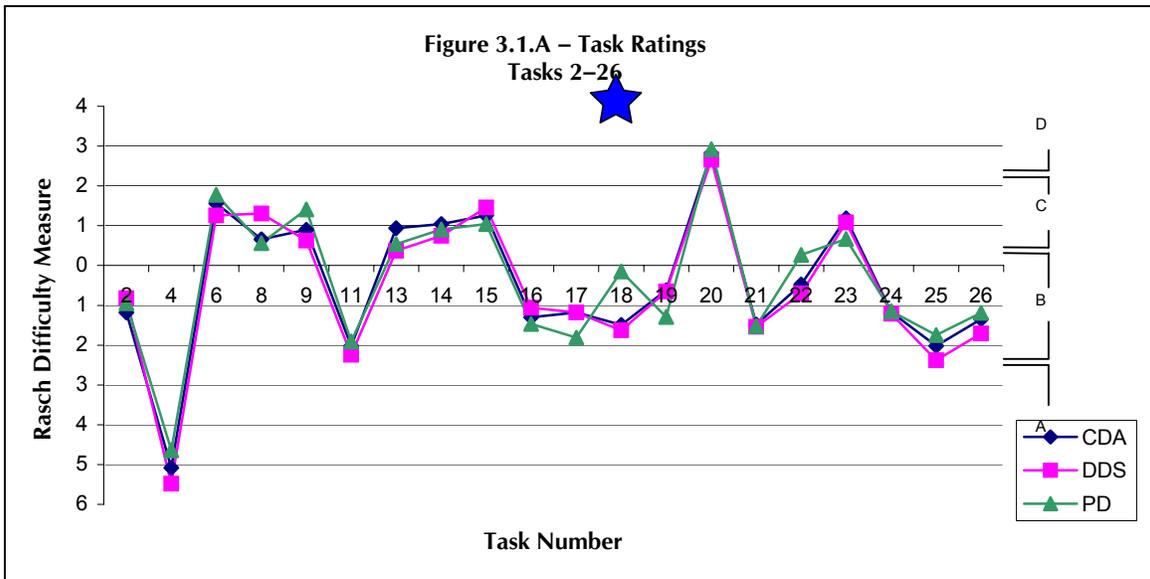
Survey Results

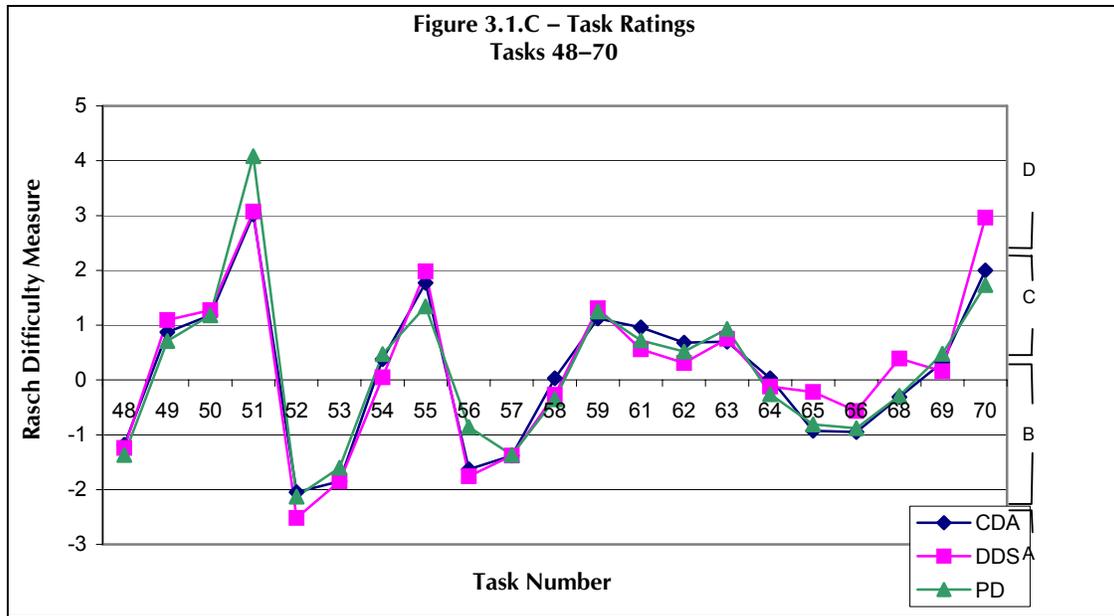
Using appropriate statistical methods and modeling,³³ the survey responses were analyzed and a number of significant results were observed:

- There was significant agreement among the three groups of respondents with regard to the skill level needed for the performance of tasks and the direction of difficulty of the tasks.
- Categorization of tasks was sufficiently consistent among the four categories to uphold the appropriateness of the category definitions.
- The analysis revealed that most dental assisting tasks fall into one of two categories—Categories B and C—which correspond roughly to the levels of dental assisting as they are most often defined in dental practice acts that recognize two levels of dental assistant.

³³ For a complete discussion of the statistical methods and models used, see Appendix 1: *DANB/ADAA Dental Assisting Core Competencies Study*, ADAA/DANB Alliance, June 15, 2005.

The following graphs (Figures 3.1.A–3.1.C) chart the Rasch Difficulty Measure assigned to each dental assisting task in the survey response analysis for each respondent group. The Rasch Difficulty Measure is a numeric value that corresponds to the survey respondents’ perceptions of the level of skill required to perform a task competently, as determined by respondents’ assignment of the task to a skill category in the survey. The Rasch Difficulty Measures in the survey analysis range from -5.50 (the most basic, requiring the least skill) to +4.00 (the most complex, requiring the most skill). The results for the three groups are plotted side-by-side.





The graph series shows that there was significant agreement among the three respondent groups with regard to the difficulty level of (or skill level needed to perform) each task and the direction of difficulty of the tasks as they relate to one another. The degree of consistency among the three respondent groups suggests the existence of a “de facto” model for dental assisting that is tacitly recognized by a great number of oral healthcare professionals across the country who are directly involved in the performance and evaluation of the tasks under consideration. These results encourage us to believe that all members of the dental team will view a more formal national recognition of the definitions and guidelines emerging from this research as an organic outgrowth of current thought within the oral healthcare community.

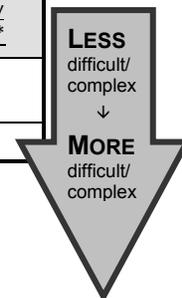
Category A:

Category A corresponds to an entry-level dental assistant with very little training or experience. The survey results allowed for only two tasks to be assigned to the entry-level dental assistants represented by Category A. These tasks, listed in ascending order of difficulty (most basic to most complex), are as follows:

Table 3.3: Tasks Assigned to Category A

Survey Task Number	Task Name	Rasch Difficulty Measure*
4	Receive and prepare patients for treatment, including seating, positioning chair, and placing napkin	-5.14
41	Prepare procedural trays/armamentaria set-ups	-2.54

* The Rasch Difficulty Measure is a numeric value that corresponds to the survey respondents’ perceptions of the level of skill required to perform a task competently, as determined by respondents’ assignment of the task to a skill category in the survey.



The respondents believe that no minimum experience, training, or education should be required to perform tasks in Category A tasks; new dental assistants can perform these tasks after only a short orientation.

What these results reveal is that there is significant agreement among the dental professionals surveyed that some training and/or education should be required for all but the most elementary dental assisting tasks.

Category B:

Category B corresponds to relatively new on-the-job-trained dental assistants, or dental assisting students who are in the process of completing up to 12 months of formal education. Of the 62 dental assisting tasks categorized in the final survey analysis, 33 fall into Category B.

The Category B tasks, listed in ascending order of difficulty (most basic to most complex) as determined by the survey, are shown in Table 3.4 on page 33.

A number of patterns can be observed among the tasks falling into Category B.

First, of the four tasks that are related to radiography and that correspond to content areas of the DANB Radiation Health and Safety (RHS) Exam, three of them can be found in the task list for Category B. Similarly, the three tasks that concern infection control and that correspond to content areas of the DANB Infection Control Exam (ICE) can be found in the Category B list.

Of the 26 **extraoral** tasks and procedures included in the survey, all but four can be found in Category B. Two are elementary and can be found in Category A. The other two—(23) *Evaluate radiographs for diagnostic quality* and (59) *Monitor nitrous oxide/oxygen analgesia*—were ranked by respondents as requiring a higher level of skill and can be found in Category C. All of the survey tasks related to identification, preparation, and manipulation of dental instruments and materials, with the exception of one task in Category A, can be found in Category B.

Of the 36 intraoral tasks and procedures included in the survey, only 10 (less than one third) can be found in the task list for Category B. Of those, three imply direct personal supervision by the dentist (i.e. the task is performed in the presence of the dentist): (48) *Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.*; (30) *Using the concepts of four-handed dentistry, assist with basic restorative procedures, including prosthodontics and restorative dentistry*; and, (58) *Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants*.

In summary, the survey results indicate that Category B dental assistants should be allowed to perform (and should be evaluated as competent to perform) tasks related to radiography and infection control, patient education and communications functions, preparation of dental instruments and materials, and all **extraoral** functions, with few exceptions. Category B dental assistants should be able to provide chairside assistance to the dentist as he or she performs a wide range of dental procedures. These dental assistants should also be fully conversant in the laws governing dental assisting activities in their state, and in infection control and hazardous material handling protocols. Finally, they should be able to recognize basic medical and dental emergencies and respond as appropriate.

Recommendations Relating to Education, Testing, and Knowledge Assessment for Dental Assisting Tasks in Category B

The ADAA/DANB Alliance makes the following recommendations for establishing and measuring the preparedness of dental assistants to perform tasks in Category B:

Education/Training

Dental assisting programs accredited by the ADA's Commission on Dental Accreditation provide excellent preparation for dental assisting careers, and the ADAA/DANB Alliance supports and encourages participation in these programs among all prospective dental assistants for whom participation is geographically and financially feasible. However, as discussed in the 1994 "Position Paper of the ADAA Task Force to Investigate Mandatory Education and Credentialing for Dental Assistants," access to these programs remains limited in some geographic areas, and the collective capacity of all ADA-accredited dental assisting programs is sufficient to meet only a fraction of the nationwide demand for dental assistants.

The ADAA/DANB Alliance applauds advancements in the development of alternative education programs, including several distance-learning programs that have been created since the ADAA Task Force's 1994 position paper, and reiterates the ADAA Task Force's recommendation to program directors of other ADA-accredited dental assisting educational programs that they investigate alternative education options. The ADAA/DANB Alliance calls upon policymakers, public health organizations, and dental educators to consider additional ways to expand the dental assisting education infrastructure. Options meriting consideration or further study include development and expansion of distance learning programs in other ADA-accredited dental assisting programs and the extension of accreditation by the ADA's Commission on Dental Accreditation to high school-level dental assisting programs, among others.

Every year, many dental assisting students enroll in dental assisting programs that are not accredited by the ADA's Commission on Dental Accreditation. While a recent study by DANB revealed that graduates of these programs did not perform as well as graduates of ADA-accredited programs on the General Chairside (CDA component) Exam administered by DANB, the ADAA/DANB Alliance believes that the potential usefulness of these programs in preparing students to perform tasks in Category B should not be overlooked. The ADAA/DANB Alliance believes that the question of the effectiveness of these programs and other types of education in preparing dental assistants for their professions in general and preparing dental assistants to perform basic chairside functions specifically (i.e. Category B functions) merits further study.

As previously noted, on-the-job training is a crucial component (and, frequently, the sole component) of dental assisting education for almost half of all dental assistants. The ADAA/DANB Alliance believes that the development of standardized protocols for dentists to use for in-office training of dental assistants is an area worthy of further consideration.

Table 3.4: Tasks Assigned to Category B

<u>Survey Task Number</u>	<u>Task Name</u>	<u>Rasch Difficulty Measure*</u>
52	Process dental radiographs	-2.23
25	Perform sterilization and disinfection procedures	-2.12
11	Transfer dental instruments	-2.09
53	Mount and label dental radiographs	-1.83
56	Apply topical anesthetic to the injection site	-1.60
21	Mix dental materials	-1.50
26	Provide pre- and post-operative instructions	-1.46
18	Apply topical fluoride	-1.41
57	Demonstrate understanding of the Centers for Disease Control and Prevention Guidelines	-1.38
39	Clean and polish removable appliances and prostheses	-1.35
32	Demonstrate understanding of the OSHA Hazard Communication Standard	-1.30
17	Identify features of rotary instruments	-1.24
16	Demonstrate knowledge of ethics/jurisprudence/patient confidentiality	-1.22
48	Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.	-1.22
24	Provide patient preventive education and oral hygiene instruction	-1.18
37	Take and record vital signs	-1.18
36	Demonstrate understanding of the OSHA Bloodborne Pathogens Standard	-1.10
2	Chart existing restorations or conditions	-1.03
66	Recognize basic dental emergencies	-0.80
19	Select and manipulate gypsums and waxes	-0.69
44	Take preliminary impressions	-0.68
65	Recognize basic medical emergencies	-0.65
30	Using the concepts of four-handed dentistry, assist with basic restorative procedures, including prosthodontics and restorative dentistry	-0.64
38	Monitor vital signs	-0.62
22	Expose radiographs	-0.50
28	Pour, trim, and evaluate the quality of diagnostic casts	-0.50
58	Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants	-0.12
64	Fabricate custom trays, to include impression and bleaching trays, and athletic mouthguards	-0.05
68	Respond to basic dental emergencies	-0.04
31	Identify intraoral anatomy	-0.03
27	Place and remove dental dam	0.23
54	Remove temporary crowns and cements	0.26
69	Remove post-extraction dressings	0.27

LESS
difficult/
complex



MORE
difficult/
complex

* The Rasch Difficulty Measure is a numeric value that corresponds to the survey respondents' perceptions of the level of skill required to perform a task competently, as determined by respondents' assignment of the task to a skill category in the survey.

Until such time as completion of a formal, accredited education program becomes a requirement for all dental assistants, the ADA/DANB Alliance encourages dental educators and the ADA's Commission on Dental Accreditation to study the merits of the expansion of coverage of the topic of dental assistant training in dental school curricula and to consider the development of standardized dental assistant training procedures and protocols that would streamline the in-office training process and assist dentist-employers in evaluating the competency and qualifications of dental assistants trained in other dental offices by other dentists.

Testing/Certification

- *Passing score on DANB's RHS and ICE Exams*

These two exams test a dental assistant's knowledge in the areas of Radiation Health and Safety and Infection Control; they are components of the full Certified Dental Assistant (CDA) Examination and may be taken by any dental assistant, as there are no eligibility prerequisites. (See Appendix 3: Excerpts from *DANB's Task Analysis, 9th Edition*, for RHS and ICE exam content areas.)

- *State-specific jurisprudence exam (where available)*

Awareness of the duties that are allowed or prohibited by law is an important part of dental assisting practice. The ADA/DANB Alliance recommends that assistants be required to pass a jurisprudence examination that will test their knowledge in this area. (Note: the development of a uniform national model may give rise to the need for a national jurisprudence exam that would replace the state-specific exam.)

Currently, as reflected in state dental practice acts, only four states (Iowa, Minnesota, New Mexico, and Texas) require or administer a separate jurisprudence exam for dental assistants.³⁴

- *CPR certification*

Category B dental assistants should know how to take a patient's vital signs and be competent to recognize and/or respond to medical emergencies, at least at the basic level.

- *Basic chairside skills exam (where available)*

Currently, as reflected in state dental practice acts, two states, Missouri and Oregon, require basic dental assisting exams (which are developed and administered by DANB) that measure a dental assistant's competency to perform basic functions (many of which are found in Category B). The ADA/DANB Alliance endorses the requirement of these exams in those states where they are available.

The survey results show that the average chairside dental assistant is being asked to perform duties that, while not recognized as expanded or advanced functions, nonetheless require considerable knowledge and skill. In the interest of public protection, it may be advisable to consider the development of a national "basic" dental assisting skills examination, which would measure competency of dental assistants in performing Category B tasks and would, therefore, be less comprehensive than the General Chairside (GC) component of DANB's CDA Exam. This basic dental assisting skills examination, in conjunction with the other ex-

³⁴ DANB, *DANB's State Fact Booklet, Volume 2* (Chicago: DANB, 2004).

ams and certification in CPR recommended by the ADA/DANB Alliance for this category, could be useful in identifying assistants who have reached a level of competency that allows them to perform Category B functions.

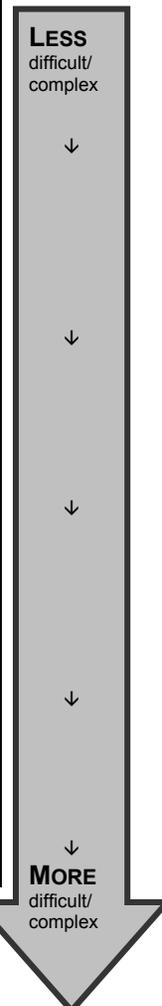
Category C:

Category C corresponds to experienced on-the-job-trained dental assistants or dental assistants who have graduated from formal dental assisting education programs, such as those accredited by the ADA’s Commission on Dental Accreditation. Of the 62 tasks categorized in the final survey analysis, 23 fall into Category C.

The Category C tasks, listed in ascending order of difficulty (from most basic to most complex) as determined by the survey analysis, are shown in the following table:

Table 3.5: Tasks Assigned to Category C

<u>Survey Task Number</u>	<u>Task Name</u>	<u>Rasch Difficulty Measure*</u>
62	Remove periodontal dressings	0.52
42	Place orthodontic separators	0.54
45	Place and remove matrix bands	0.54
13	Remove sutures	0.69
63	Place post-extraction dressings	0.73
61	Remove permanent cement from supragingival surfaces	0.78
9	Perform coronal polishing procedures	0.84
8	Monitor and respond to post-surgical bleeding	0.90
14	Dry canals	0.92
49	Perform vitality tests	0.94
23	Evaluate radiographs for diagnostic quality	1.10
40	Apply pit and fissure sealants	1.17
59	Monitor nitrous oxide/oxygen analgesia	1.20
50	Place temporary fillings	1.21
15	Tie in archwires	1.31
6	Place and remove retraction cord	1.45
47	Fabricate and place temporary crowns	1.46
43	Size and fit stainless steel crowns	1.66
35	Place periodontal dressings	1.69
29	Size and place orthodontic bands and brackets	1.72
34	Place liners and bases	1.73
55	Remove temporary fillings	1.81
46	Take final impressions	2.18



* The Rasch Difficulty Measure is a numeric value that corresponds to the survey respondents’ perceptions of the level of skill required to perform a task competently, as determined by respondents’ assignment of the task to a skill category in the survey.

A number of observations can be made about the tasks in Category C. First, all but two of the 23 items in Category C are **intraoral** tasks or procedures. Aside from (18) *Apply topical fluoride*, which can be found in Category B, the tasks that are most often identified in state dental practice acts as “expanded functions,” requiring supplementary education, permits, registration, or credentialing, can be found in Category C. In fact, there is no task in Category C that is not recognized as an expanded function in some states.^{35,36} In addition, Category C contains the functions that states most often restrict from delegation to dental assistants unless supplemental permits are obtained; these include (9) *Perform coronal polishing procedures*, (40) *Apply pit and fissure sealants*, and (59) *Monitor nitrous oxide/oxygen analgesia*.

A small number of functions in Category C cannot, under the laws of some states, be delegated to dental assistants. Most notably, (46) *Take final impressions* is currently specifically prohibited in at least 16 states.

In summary, the survey analysis indicates that Category C dental assistants should be allowed to perform (and should be evaluated as competent to perform) advanced intraoral procedures, also called “expanded functions” or “expanded duties,” under appropriate levels of dentist supervision. Only four tasks were deemed by survey respondents to be of a complexity beyond the competency level of Category C assistants. Therefore, all but the most complex intraoral dental assisting procedures should be within the scope of practice and the competency of Category C assistants.

Recommendations Relating to Education, Testing, and Knowledge Assessment for Dental Assisting Tasks in Category C

The ADAA/DANB Alliance makes the following recommendations for establishing and measuring the preparedness of dental assistants to perform tasks in Category C:

Education/Training

The ADAA/DANB Alliance believes that the two primary pathways by which a dental assistant can become eligible to sit for the full DANB CDA Exam or the General Chairside (GC) component of the CDA Exam are also excellent models to use in establishing training and education requirements for assistants performing tasks in Category C.

The first eligibility pathway centers on graduation from a dental assisting program accredited by the ADA’s Commission on Dental Accreditation. As previously noted, the ADAA/DANB Alliance urges expansion of access to these programs through alternative education offerings or other means.

The second eligibility pathway is for on-the-job-trained dental assistants; in addition to a high school diploma, 3,500 hours of full- or part-time work experience accumulated over a period of 24 to 48 months is required.

Studies conducted by DANB have shown that candidates using each of these two pathways to qualify to take the CDA Exam (or the GC component of the CDA Exam) pass the exam at rates that are statistically equivalent to candidates using the other pathway; therefore, the

³⁵ ADA. *2002 Survey of Legal Provisions for Delegating Intraoral Functions to Chairside Assistants and Dental Hygienists* (Chicago: ADA, 2003).

³⁶ DANB, *DANB’s State Fact Booklet, Volume 2* (Chicago: DANB, 2004).

ADAA/DANB Alliance believes that education and training obtained through either of these pathways is appropriate to prepare dental assistants to perform the tasks in Category C.

Testing/Certification

- *Certified Dental Assistant (CDA) credential*

The ADAA/DANB Alliance recommends that passing DANB's CDA Exam and maintaining a current DANB CDA credential be required for this category. Note that maintenance of the CDA credential requires 12 hours of continuing dental education per year and current CPR certification. (See Appendix 3 for excerpts from *DANB's Task Analysis, 9th Edition*, for full content coverage of DANB's CDA Exam, which comprises the ICE, RHS, and GC component exams.)

It is important to note that, within the context of these recommendations, those dental assistants who are qualified to perform Category B tasks would already have demonstrated appropriate knowledge levels by passing DANB's RHS and ICE Exams, and would need only to pass DANB's GC Exam to earn the CDA credential (as long as the RHS, ICE, and GC components have all been passed within a five-year period).

Currently, a number of states develop and administer their own state-specific dental assisting examination and confer Registered Dental Assistant (RDA) or similar status upon dental assistants who successfully pass the state-specific examination. The ADAA/DANB Alliance believes that these state-specific exams may be effective in measuring dental assisting competency, as long as they are developed in accordance with nationally accepted psychometric methods and principles. As such, the ADAA/DANB Alliance does not oppose continued use of RDA examinations, in those states where they are currently administered, as part of an interim step during the transition to a nationally accepted model for dental assisting. Ultimately, the ADAA/DANB Alliance expects that that the continued long-term use of state-specific RDA examinations and credentials will be less effective than the proposed nationwide acceptance of a uniform national examination and credential in simplifying interstate reciprocity and, thereby, enhancing recruitment and promoting long-term retention of a qualified dental assisting workforce.

In summary, the ADAA/DANB Alliance acknowledges that the interim acceptance of state-specific RDA (or similar) designation might be part of a successful transition to a national model, as long as the examination(s) underlying such designations have been developed according to nationally accepted psychometric principles.

- *CPR certification*

CPR certification prepares dental assistants to recognize and/or respond to medical emergencies, at least at the basic level. CPR certification is an eligibility prerequisite to sit for the CDA Exam and is required for annual renewal of the CDA credential.

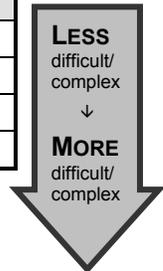
Category D:

Category D corresponds to highly skilled dental assistants who have received specialized training and education in the performance of specific advanced functions. Of the 62 tasks categorized in the final survey analysis, only four fall into Category D. The Category D tasks, listed in ascending order of difficulty (from most basic to most complex) as determined by the survey analysis, are as follows:

Table 3.6: Tasks Assigned to Category D

<u>Survey Task Number</u>	<u>Task Name</u>	<u>Rasch Difficulty Measure*</u>
70	Place stainless steel crowns	2.33
20	Perform supragingival scaling	2.76
51	Carve amalgams	3.09
33	Place, cure and finish composite resin restorations	3.40

* The Rasch Difficulty Measure is a numeric value that corresponds to the survey respondents' perceptions of the level of skill required to perform a task competently, as determined by respondents' assignment of the task to a skill category in the survey.



The tasks that are found in Category D are complex intraoral tasks that involve a high degree of skill, precision, and manual dexterity. While a few states allow dental assistants to perform one or more of these functions, each of these tasks is currently restricted from delegation to dental assistants in some states.

If dental assistants are allowed by law to perform these tasks and the dentist-employer wants to delegate these tasks to dental assistants, the ADA/DANB Alliance recommends that only dental assistants who have earned the CDA credential and have significant experience performing tasks in Category C should be allowed to receive prescribed on-the-job training in these Category D tasks or to enroll in ADA-accredited or state dental board-approved formal education covering the performance of these tasks. The ADA/DANB Alliance recommends that dental assistants be allowed to perform these tasks only if they have received specific advanced clinical training in the performance of these tasks and have successfully demonstrated competency in a hands-on clinical examination, developed by a nationally accredited testing agency in accordance with nationally accepted psychometric standards.

Dental Assisting Tasks Not Included in the DANB/ADAA Core Competencies Study

The DANB/ADAA Core Competencies study included 70 dental assisting tasks (eight of which were omitted from the final analysis because of statistical misfit). It is important to note that dental assistants, in practice, perform a large number of tasks that were not studied in the DANB/ADAA Core Competencies Study. In selecting a finite set of tasks to study, it has not been the intention of the ADA/DANB Alliance to suggest that dental assistants' activities should be limited to the performance of only these tasks; rather, the tasks selected for the study were determined to be representative of a broad range of dental assisting core competencies.

As previously noted, some state dental practice acts attempt to define a dental assistant's scope of practice by specifically enumerating the tasks that dentists may delegate to dental assistants, while others define dental assisting practice in broad terms and allow the dentist to delegate to dental assistants any task that is not expressly forbidden. Both of these approaches to defining the scope of practice of dental assistants present certain challenges.

In defining scope of practice by listing allowable tasks, it is nearly impossible to include every task that a dental assistant may be called upon to perform. Lists of allowable tasks that are not developed carefully can have the effect of being more restrictive in practice than the regulators creating such lists intended and can lead to decreased dental office efficiency and productivity and/or widespread non-compliance with dental practice regulations.

Conversely, in attempting to define the scope of practice in less restrictive terms by allowing dental assistants to perform any task that is not expressly prohibited, regulators risk enacting rules that are more permissive in practice than what they intended. In such cases, if the list of prohibited tasks does not adequately preclude the performance of tasks that are beyond the competency of dental assistants, public safety may be significantly compromised.

Even when dental assisting scope of practice is defined effectively for current dental office conditions, changes in the science of oral healthcare over time may give rise to the need to permit or prohibit additional tasks and functions.

A uniform national dental assisting model can be a useful tool in resolving the difficulties inherent in defining the scope of practice for dental assistants. The recommendations emerging from the DANB/ADAA Core Competencies Study will form the basis of a model that describes each category of dental assisting tasks and defines the education, experience, and credentials that a dental assistant should have to perform the tasks in each category. The descriptions and definitions associated with each category provide flexibility and allow the model to be used as a framework within which to evaluate the appropriateness of any new or previously omitted task for delegation to dental assistants. Further research can also be conducted to substantiate the inclusion of additional dental assisting tasks within a specific category (Category A, B, C, or D).

Current Status of Definition and Regulation of Supervision of Dental Assistants by Dentists

An important consideration in the discussion of the delegation of tasks to dental assistants is that of supervision of dental assistants by their dentist-employers. The ADA has identified four levels of supervision for dental auxiliaries, including dental assistants, which it defines in its "Comprehensive Policy Statement on Allied Dental Personnel," (2002: 400) which is part of its *Current Policies*, last updated in 2002. Note that "allied dental personnel" refers to dental assistants, dental hygienists, and dental laboratory technicians.

The four levels of supervision defined by the ADA are as follows:

Personal supervision. A dentist is personally operating on a patient and authorizes the allied dental personnel to aid treatment by concurrently performing a supportive procedure.

Direct supervision. A dentist is in the dental office or treatment facility, personally diagnoses the condition to be treated, personally authorizes the procedures and remains in the dental office or treatment facility while the procedures are being performed by the allied dental personnel and, before dismissal of the patient, evaluates the performance of the allied dental personnel.

Indirect supervision. A dentist is in the dental office or treatment facility, has personally diagnosed the condition to be treated, authorizes the procedures and remains in the dental office or treatment facility while the procedures are being performed by the allied dental personnel and will evaluate the performance of the allied dental personnel.

General supervision. A dentist is not required to be in the dental office or treatment facility when procedures are being performed by the allied dental personnel, but has personally diagnosed the condition to be treated, has personally authorized the procedures and will evaluate the performance of the allied dental personnel.³⁷

Furthermore, the ADA's Comprehensive Policy Statement on Allied Dental Personnel stipulates that intraoral expanded functions should be performed by allied dental personnel "only under the direct supervision of a dentist."³⁸

Because the study of dental assisting core competencies undertaken by the ADAA/DANB Alliance did not address the question of supervision, this paper does not make any recommendations as to the levels of supervision that should be necessary for the delegation of the tasks included in the study to dental assistants. However, the ADAA/DANB Alliance believes it is important to call attention to the fact that, while the ADA has defined supervision levels in the aforementioned policy statement, which governs the ADA's own activities and the activities of its members, these definitions have not been uniformly adopted by the dental boards of every U.S. state or district.

Incongruities among the 50 states in the definitions and requirements for supervision can only interfere with the nationwide standardization of dental assisting guidelines. In furtherance of the establishment of a uniform national model for the dental assisting profession, the ADAA/DANB Alliance encourages the uniform adoption of the ADA's definitions for the various levels of supervision. The ADAA/DANB Alliance also recommends that the level of supervision required to perform each dental assisting task be given careful consideration by competent authorities within the oral healthcare community, in consultation with and conformity to the ADA's current policies.

³⁷ ADA. *Current Policies: Adopted 1954-2003*, online version (Chicago: ADA, 2003), 34.

³⁸ *Ibid*, 33.

Implications of Study Results

As previously noted, the study reveals a great deal of congruity in the classification and categorization of dental assisting tasks across all survey respondent groups. This congruence is encouraging, because it points to the existence of a de facto model relating to the activities of dental assistants that is recognized, albeit tacitly, within the field of dentistry. It has not been our objective to recommend standards that would be onerous to enforce and uphold or that would require a paradigm shift in the oral healthcare community's thinking about the dental assisting profession; rather, it has been our objective to identify similarities and areas of agreement among oral healthcare professionals and to use these congruities as the basis for proposing a uniform national model that would be a natural outgrowth of principles currently accepted and followed by dental professionals.

Moreover, the proposal emerging from the ADA/DANB Alliance's research conforms to the principles outlined in the ADA's "Comprehensive Policy Statement on Allied Dental Personnel," which requires that the advocacy of functions that may be appropriately delegated to allied dental personnel, including dental assistants, be "based on (1) the best interests of the patient; (2) the education, training, and credentialing of the allied dental personnel; (3) considerations of cost-effectiveness and efficiency in delivery patterns; and (4) valid research demonstrating the feasibility and practicality of utilizing allied dental personnel in such roles in actual practice settings."³⁹ The ADA's policy further stipulates that regulations pertaining to the delegation of expanded functions "should specify (1) education and training requirements; (2) level of supervision by the dentist; (3) assurance of quality; and (4) regulatory controls to assure protection of the public."⁴⁰

As such, while we expect differences of opinion relating to the means by which a uniform national model would be formalized or codified and the methods and authority used to enforce adherence to such a model, we do not expect any significant dissent relative to the actual definitions and designations of dental assisting tasks and categories that form the basis of the proposal, nor do we expect any opposing views relative to the underlying premise that guidelines for the dental assisting profession in general are necessary to serve the public good, and that a nationally accepted model is desirable for ensuring consistency in the quality of care and public protection that the ADA advocates.

—On the Question of the Oral Healthcare Services Infrastructure Capacity

Dental Office Productivity

Delegating certain tasks to qualified dental assistants can improve the productivity of the dental team by allowing the other dental team members—dentists and dental hygienists—to spend more of their time performing the duties and procedures that are within the unique purview of their respective positions. Increased productivity reduces the duration of appointments for each patient and allows a dental practice to serve more consumers. Increased productivity of dental offices on a large scale serves to enhance the overall capacity of the dental services infrastructure and, thereby, improve access to oral healthcare for the general population.

³⁹ ADA. *Current Policies*, 33.

⁴⁰ *Ibid*, 33.

Delegation of duties to dental assistants can contribute to productivity enhancements and consequent capacity improvements only if the individuals to whom the duties are delegated are qualified and can perform the tasks expediently and competently. Attempting to increase productivity through delegation of duties to dental assistants necessarily entails evaluating a dental assistant's preparedness to accept the assignment of a particular task. The guidelines emerging from the DANB/ADAA Core Competencies Study have the potential to serve as an effective framework within which dentists may make staffing decisions and day-to-day productivity decisions that collectively affect the overall oral healthcare services infrastructure capacity. It is to be hoped that the acceptance of these guidelines on a national level will serve to expedite the realization of actual infrastructure capacity improvements.

Dental Assistant Recruitment and Retention

The high turnover rate of dental assistants is one factor that compromises the productivity of dental offices and strains the capacity of the oral healthcare infrastructure. As previously discussed, research shows that dental assistants (and other healthcare auxiliaries) who see themselves as part of a profession and who have opportunities for growth and advancement within their field report higher job satisfaction and are less likely to leave the profession than those for whom the successive rungs of a career ladder are not available. The ADAA/DANB Alliance believes that the descriptions of dental assisting levels and the list of tasks appropriate for each level, as determined by the DANB/ADAA Core Competencies Study, should be used as the basis for establishing a viable career ladder for dental assistants.

There are a number of states whose recognition of at least two levels of dental assistant have had the effect of creating a career ladder for dental assistants within those states. As previously noted, there are 31 states that explicitly or implicitly recognize more than one level of dental assistant. The ADAA/DANB Alliance believes that future studies comparing the job satisfaction levels and long-term retention of qualified dental assistants in these states to the job satisfaction levels and retention rates of dental assistants in states without an established career ladder for dental assistants will contribute valuable data to the discussion of the establishment of a uniform national model for dental assisting. The ADAA/DANB Alliance encourages the communities of interest, including DANB and the ADAA, to pursue further research exploring the role of an established career ladder for dental assistants in reducing dental assistant turnover and promoting long-term maintenance of an experienced dental assisting workforce.

Public Health Initiatives and Dental Assistant Volunteers

As discussed previously, a nationally recognized model for dental assisting can enhance and simplify the process of identifying and recruiting dental assistants to work as volunteers in outreach programs created to make oral healthcare services available to underserved segments of the population. The ADAA/DANB Alliance believes that the lack of nationally recognized guidelines for assessing the competency of dental assistants can compromise the safety of the intended beneficiaries of such programs and can also significantly hamper efforts to recruit volunteers.

Dental assistants participating in such programs may find themselves working under the supervision of dentists who do not have ample opportunity to assess their level of skill and competence. To ensure that the delegation of tasks to dental assistants in volunteer settings occurs according to principles that ensure public safety, the ADAA/DANB Alliance recommends adherence to the guidelines emerging from the DANB/ADAA Core Competencies

Study for all dental assistant participants in such programs. While it is likely that some volunteer programs already require that dental assistants hold certain credentials, including DANB Certification, as a requirement for participation, the extension of standardized credentialing requirements to the general dental assistant population will expand the pool from which these programs can hope to draw participants.

—On the Question of Patient Health and Safety

The Role of Dental Assistants in Enhancing Patient Health and Safety

It is undeniable that dental assistants make an important contribution to the enhancement of patients' health and safety in the dental office. Dental assistants are often responsible for performing sterilization and disinfection procedures and for taking steps to minimize patients' exposure to radiation during radiographic processes. In addition, dental assistants may often find themselves in a position to observe medical and dental emergencies before any other member of the team and must be prepared to respond appropriately. All of the tasks studied in the DANB/ADAA Core Competencies Study related to infection control, radiography, and emergency response—which directly affect the safety of patients and dental team members alike—are found in Category B.

While the assignment of these tasks to Category B may be an indicator that survey respondents did not consider these tasks difficult to master, it may also indicate that survey respondents considered *early* mastery of these tasks essential for working as a dental assistant.

Conversely, intraoral tasks whose incorrect performance could result in significant discomfort or injury to the patients have, by and large, been assigned to Category C, revealing that dentists don't believe they should assign these tasks to dental assistants without proper education and credentials, and dental assistants and their educators do not believe that dental assistants should be asked to perform these tasks until they have received proper education and credentials. While the assignment of these tasks to Category C could be an indicator that survey respondents considered these tasks difficult to master, it may also indicate a high level of caution among survey respondents and cognizance of the risks involved in these procedures.

In reviewing the categorization of dental assisting tasks, it is tempting to ascribe to survey respondents a high level of concern for patient safety. In actual fact, we cannot know from the survey results how much respondents' attitudes about patient safety influenced their responses. What we can tell, however, is that the categorization of tasks by respondents appears to be in line with the dictates of common sense with regard to safety—specifically, that mastery of safety-related knowledge should occur early in a dental assistant's career, while tasks whose incorrect performance could lead to injury or discomfort for the patient should be reserved for dental assistants who hold the appropriate credentials and who have had formal education and training or significant experience. These results should be comforting and encouraging to any person who expects ever to visit a dental office or undergo a dental procedure.

Public Attitudes

It is no secret that some people find being on the receiving end of dental procedures to be an unpleasant experience. Fear and aversion to unpleasant experiences are strong factors that may cause some people to forgo preventive visits to the dentist or to put off treatment of serious dental problems and conditions. Incorrect treatment at the hands of ill-qualified dental team members or dissemination of incorrect oral healthcare information by ill-qualified team members providing patient education, combined with anecdotally disseminated reports of such occurrences, are likely to contribute to the reluctance of the public to seek dental care and may even offset some of the gains that educational initiatives have made and might continue to make in the collective oral health of the public.

The confluence of survey respondents' categorization of tasks and what we believe are common-sense expectations with regard to patient safety is encouraging and should be heralded as good news by the public. However, the adoption of a nationally recognized set of guidelines governing education, training, and credentialing for dental assistants and the publicizing of such changes to the general population could serve to mitigate public apprehension about dental office visits and, thereby, enhance existing and future educational initiatives to promote increased utilization of oral healthcare services. The ADAA/DANB Alliance believes that public attitudes about dental office visits and the effect that mandatory education and credentialing of dental assistants could have on these attitudes is an area that merits further study.

—On the Potential Financial Impact to Communities of Interest

Dental Assistant Competence and the Cost of Oral Healthcare Services

Of utmost importance in the discussion of the development of a uniform national model for the dental assisting profession is the consideration of the financial impact to employers, patients, and dental assistants themselves. One objection to mandatory education and credentialing for dental assistants has been the contention that requiring dental assistants to fulfill certain education and credentialing requirements before they can perform certain tasks inhibits rather than enhances dental office efficiency, because dentists are prevented from delegating tasks to assistants whom they have trained and whom they deem to be qualified. Some dentist-employers have claimed that credentials, such as DANB Certification, are merely a vehicle that dental assistants can use to improve their position in salary negotiations, leading to increases in overhead costs for dental offices—costs that are ultimately borne by patients. Conversely, some dental assistants lament their inability to afford the cost of acquiring education and obtaining/maintaining credentials, because their wages are insufficient to support these expenses.

As previously noted, the guidelines emerging from the DANB/ADAA Core Competencies Study reflect the opinions of actual dentists, dental assistants, and dental assisting educators. In recognition of the fact that, to be effective, nationally accepted guidelines must reflect realistic dental office conditions, the creators of the study set out to identify the best practices for delegation of duties to dental assistants as determined by oral healthcare professionals themselves. The focus of the study has not been to find justification for restricting the delegation of duties to dental assistants; rather, it has been to create guidelines that will

help dentists maximize the use of qualified dental assistants in their practices and, thereby, enhance cost efficiency.

The assertion that the employment of an educated and credentialed dental assistant represents greater overhead (in compensation, reimbursement for education and credentialing costs, and time lost to course attendance, credential verification, and record keeping) for the dental practice as compared to the employment of a non-credentialed dental assistant overlooks a number of important factors. These factors include, among others, the cost to dental offices arising from

- rapid turnover of unqualified dental assisting staff, leading to increases in costs related to recruitment of qualified dental assistants and to in-office training of newly recruited assistants (for those who have not graduated from ADA-accredited dental assisting programs or completed other quality dental assisting education),
- errors committed or incorrect information provided to patients by ill-qualified dental office personnel,
- loss of patients and loss of goodwill associated with the sub-standard performance of inadequately trained dental assistants, and
- increases in costs related to patient acquisition (i.e. advertising and marketing) when such losses do occur.

Because the value of these losses may be difficult to quantify, dentist-employers may fail to take them into account when considering the advantages and disadvantages of hiring dental assistants who are formally educated and who hold recognized credentials, such as the CDA credential.

The ADA/DANB Alliance believes that any increase in the cost of employing a formally educated and credentialed dental assistant as compared to the cost of employing a dental assistant without education or credentials is more than offset by the cost-savings that can be achieved through maximizing the dental team's efficiency, avoiding errors and enhancing patient safety, promoting job satisfaction and retention of qualified dental assistants, improving patient satisfaction, and preserving the dental practice's reputation. While it has not been feasible to complete and include in this paper a thorough quantitative analysis of the relationship of the competency of dental assistants to overall dental office overhead, the ADA/DANB Alliance recommends that further study in this area be undertaken by the communities of interest and believes that such studies will provide invaluable data that will inform the discussion of a uniform national model for the dental assisting profession.

If it is true that employment of educated and credentialed dental assistants can lead to a reduction in overhead costs for a dental practice, then it appears unlikely that promoting appropriate levels of education and credentialing for dental assistants will result in an additional financial burden for patients. Because overhead costs are passed on to patients, any reduction in overhead would be expected to translate into a cost savings (or, at the very least, cost stability) for the consumers of oral healthcare services.

Similarly, recognition of the value of educated, experienced, and credentialed dental assistants in maximizing cost-efficiency should lead to greater demand for dental assistants who are DANB-Certified. Currently, the cost of DANB's Certification examination is often either included in dental assisting students' tuition or borne by the dentist-employer. For those as-

sistants who pay for the exam themselves, increases in wages that accompany this increase in demand should eliminate dental assistants' concerns about the affordability of sitting for a Certification examination and of maintaining Certification on an annual basis. A recent survey conducted by DANB indicates that a DANB CDA earns, on the average, \$1.58 more per hour (or about \$250 more per month, if employed full-time) than his or her non-Certified counterparts.⁴¹

Dentists' Liability

In some states, it is within the sole and individual discretion of dentists to educate and train dental assistants and to judge the preparedness of an assistant to perform a task, despite the fact that most dental school curricula do not currently include coursework in educational methodology and performance assessment. The dentist's position as the sole educator of a dental assistant and the sole arbiter of dental assistant competence (in cases where state law does not make provisions for dental assistant credentialing) puts him or her in the position of being the sole bearer of responsibility for the dental assistant's performance. This responsibility and potential liability is even greater for those dentists who delegate the training of uneducated entry-level dental assistants to dental hygienists or to other senior dental assistants in their employment.

Furthermore, in states where dentists cannot currently rely on a state-sponsored system of licensure, registration, or credential verification and must themselves verify and maintain records evidencing a dental assistant's education and credentials, the time-consuming responsibility of authenticity verification and record keeping is compounded by the full legal burden that this responsibility implies.

One area that merits further study is the impact of dental assistant education and credentialing on dental malpractice litigation and other legal proceedings related to the practice of dentistry. A comprehensive analysis of the financial impact of dental legal proceedings on the cost and accessibility of oral healthcare services is beyond the scope of this paper. However, dental assistant credentialing can provide a measure of protection to dentists who find themselves as defendants in lawsuits in which the performance of their dental assistant employees is called into question. While, under current law in most states, the dentist retains full legal responsibility for treatment outcomes, it seems reasonable and likely that adherence to a nationally accepted set of guidelines in hiring and delegating duties to dental assistants who have been evaluated and certified by third parties would serve to mitigate a dentist's liability in cases involving a dental assistant's performance.

In recent years, DANB has received requests for information about potential reductions in malpractice insurance premiums for dentists who employ Certified Dental Assistants. Because no research has been conducted to date into the role of dental assistant Certification in reducing errors in the dental office or in mitigating dentists' liability for such errors, insurance premium discounts are not currently available for dentists who employ Certified assistants. However, the ADAA/DANB Alliance believes that further research in this area is warranted and that the outcome of such research, if undertaken by the communities of interest, may lead to the recognition by insurance providers of the benefits of dental assistant Certification and consequent reductions in insurance premiums for employers of Certified assistants in the future.

⁴¹ "Salary Survey Results Say CDAs Still Earning More," *Certified Press* 22, no. 4 (2004): 1, 3.

—On the Future of the Dental Assisting Profession

The ADAA/DANB Alliance envisions that the future will bring positive changes to the dental assisting profession in the form of a uniform national model that will also serve as a viable career ladder by which dental assistants can ascend from the entry level to the most-skilled expanded functions level. The ADAA/DANB Alliance believes that establishing a uniform national model for dental assistants will serve to elevate the profession of dental assisting and promote job satisfaction and longevity among dental assistants, leading to enhanced efficiency, lower costs to the dental practice over the long term, and a higher quality of care for the public.

The DANB/ADAA Core Competencies Survey proposed four levels for the dental assisting profession, and described the education, experience, and training associated with each level. The ADAA/DANB Alliance envisioned that each of these four categories would represent one “rung” on the dental assisting career ladder. Respondents were asked to assign each of 62 dental assisting tasks (net of eight tasks that were excluded from the final analysis) to one of these four categories. As the results were analyzed, the second and third categories emerged as the most significant, while the first category (the “entry” level) and the fourth category (the “expanded functions” level) each had been assigned only a few tasks.

The table on the following page (Table 3.7) summarizes the ADAA/DANB Alliance’s proposed uniform national dental assisting model, as determined by the responses of survey participants, and the recommended requirements for each level, progressing from the entry-level at the bottom to the most advanced level at the top.

The ADAA/DANB Alliance would like to state unequivocally that dental assistants are members of an oral healthcare team who work under the supervision of dentists (or under the supervision of dental hygienists, in states where supervision of dental assistants by dental hygienists is permitted by law) and that no future is envisioned in which the role of the dental assistant will evolve into that of an independent provider of dental services. Indeed, the very term “dental assistant” denotes a person who gives aid to another person in the performance of dental tasks and is inconsistent with the notion of practicing independently. The interest of the ADAA/DANB Alliance in defining and standardizing delegable functions has always been predicated on the assumption that these functions would be performed under appropriate levels of supervision, as determined by competent authorities within the oral healthcare community.

Table 3.7: Proposed Uniform National Model for the Dental Assisting Profession

Suggested Title	Recommended Education/ Training	Recommended Experience	Recommended Credentials	Summary of Allowable Tasks
Expanded Functions Dental Assistant (Category D in this paper)	Specialized formal training within ADA-accredited program or state-board approved course <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Education and experience required.</div>	Several years' experience working as a CDA and performing intraoral tasks and Prescribed on-the-job training by licensed dentist in the specific functions to be performed	CPR Certification Clinical examination (to be developed by a nationally accredited testing agency in accordance with national accepted psychometric standards)	Four tasks (See Table 3.6): All are complex intraoral tasks involving a high degree of skill, precision, and manual dexterity
Certified Dental Assistant OR Registered Dental Assistant* (Category C in this paper)	Graduation from an ADA-accredited dental assisting education program <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Either education or experience required.</div>	Two or more years' full-time or four or more years' part-time experience, including on-the-job training by licensed dentist	CPR Certification Current DANB CDA credential <i>*(or state-specific RDA credential, if it measures knowledge of these Category C tasks and is developed according to generally accepted psychometric principles and standards)</i>	23 tasks (See Table 3.5): All but the most difficult and complex intraoral procedures, as allowed by law
Dental Assistant (Category B in this paper)	Enrollment in and partial completion of an ADA-accredited dental assisting program OR Graduation from a dental assisting program (non-ADA-accredited) <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Either education or experience required.</div>	Up to two years' full-time experience or up to four years' part-time experience, which includes on-the-job training by licensed dentist	CPR Certification DANB RHS Exam DANB ICE Exam Jurisprudence Exam (where available) Basic Dental Assisting Skills Exam (where available) Future national basic dental assisting skills and jurisprudence exams, to be developed (if deemed appropriate)	33 tasks (See Table 3.4): All extraoral tasks, except those requiring specialized knowledge or skill Chairside assistance during dental procedures Radiography Infection control procedures Emergency response Limited intraoral procedures
Entry Level Dental Assistant (Category A in this paper)	High school diploma	In-office orientation, or verbal/written instructions of licensed dentist	None	Two tasks (See Table 3.3): The most elementary dental assisting tasks

Section Four: Recommendations and Next Steps

As the ADAA Task Force Investigating Mandatory Education and Credentialing for Dental Assistants noted in 1994, realizing the goal of enacting guidelines for the dental assisting profession will require “a tremendous amount of dedication, cooperation and effort . . . by all communities of interest.”

The first step in the process of establishing a uniform national model for the dental assisting profession has been to develop and propose a reasonable set of guidelines, based on empirical, statistically analyzed data derived from survey responses of those most qualified to determine the appropriateness of such guidelines: dentists, dental assistants, and dental assisting educators. The dental assistant community, as represented by the ADAA and DANB, has taken this first step, gathering and analyzing empirical data, identifying areas of agreement among oral healthcare professionals, and outlining a recommended set of guidelines, as set forth in this paper.

The next step will involve receiving input from other communities of interest, pursuing further areas of research that might provide additional useful data, and synthesizing such input and data into a final proposal that will be submitted to the appropriate communities of interest with the authority to enact change.

In considering the roles of the various communities of interest in the proposed endeavor, the ADAA/DANB Alliance has developed a set of recommendations for each group. These recommendations are set forth below.

For Dental Practitioners and Dental Organizations

The ADAA/DANB Alliance does not expect dentists to look upon the proposed establishment of a uniform national model for dental assistants with indifference. As previously noted, every effort has been made to devise a national model that reflects real-world dental office conditions. The recommended national guidelines emerging from the DANB/ADAA Study to Define and Rank Order Dental Assisting Core Competencies reflect the opinions of oral healthcare professionals, including the opinions and perceptions of licensed dentists.

The ADAA/DANB Alliance recommends that dentists continue to take an active interest in the issue of a uniform national model for the dental assisting profession. We ask that dentists who are involved in their local and state dental associations or in organized dentistry at the national level bring this important issue to the attention of the leadership of such organizations and voice their support for and endorsement of the establishment of a national set of educational, training, and credentialing standards for dental assistants.

Furthermore, the ADAA/DANB Alliance invites national dental associations to sponsor further research into the role of dental assistant education and credentialing in improving dental office productivity, in reducing dental assistant turnover, in maximizing patient satisfaction, in minimizing losses associated with dental assistant errors, in potentially mitigating dentists' liability and reducing insurance costs, and in improving the delivery of oral healthcare services overall. The ADAA/DANB Alliance also encourages national dental associations to sponsor and/or perform research into the development a formal training pro-

tocol and standardized educational materials for use by dentists who conduct on-the-job training of dental assistants, with the goal of elevating and standardizing such training.

For Dental Assisting Educators

As noted previously, one impediment to the establishment of mandatory education requirements for dental assistants is the present relatively limited capacity and accessibility of ADA-accredited dental assisting education programs. The ADA/DANB Alliance recommends that sponsors and directors of ADA-accredited dental assisting programs continue their efforts to expand access to these programs through alternative education programs, including distance-learning programs. The ADA/DANB Alliance is aware that the ADA is considering accrediting high school dental assisting programs. If enacted, accreditation of high school–level programs promises also to expand the capacity of quality dental assisting educational opportunities.

The ADA/DANB Alliance also recommends that those dental assisting programs that are not currently accredited by the ADA’s Commission on Dental Accreditation pursue this accreditation and encourages the institutions sponsoring such programs to provide additional resources and funding to effect the changes needed to allow these programs to qualify for ADA accreditation.

For Legislators, State Boards of Dentistry and Other Policymakers

State boards of dentistry and other state professional regulatory bodies, by and large, hold the authority to recommend and implement administrative rules that will make the uniform national dental assisting model proposed by this paper a reality. The ADA/DANB Alliance recommends that policymakers and regulators take the proposed uniform national dental assisting model set forth in this paper under advisement and open the floor for discussion in their respective spheres of influence.

The ADA/DANB Alliance also recommends that, in those states that allow individuals who have not completed ADA-accredited dental assisting programs to work as dental assistants, state dental boards work with dental educators to develop a formal in-office training protocol and standardized educational materials that dentist-employers can use for on-the-job training of these dental assistants.

For Federal Health Agencies and Oral Health Advocacy Groups

The ADA/DANB Alliance recommends that federal health agencies and independent oral health advocacy groups endorse the national model for dental assisting proposed by the ADA/DANB Alliance and, to the extent possible, provide funding for further research.

In this paper, the ADA/DANB Alliance has identified areas of future research that may inform the discussion of a uniform national dental assisting model. These include:

- Effects of delegation of expanded functions to qualified dental assistants on dental office overhead and on the financial accessibility of oral healthcare services
- Public attitudes about dental office visits and the effect that mandatory education and credentialing of dental assistants could have on these attitudes

- The relationship of the competency of dental assistants to overall dental office overhead
- The impact of dental assistant education and credentialing on dental malpractice litigation and other legal proceedings related to the practice of dentistry
- The feasibility of the development of standardized in-office training protocols and educational materials for use by dentists who conduct on-the-job training of dental assistants
- The feasibility of the development of a basic skills competency examination for dental assistants and investigation of possible eligibility pathways, including but not limited to completion of dental assisting education programs not accredited by the ADA's Commission on Dental Accreditation, but accredited by other accrediting bodies recognized by the U.S. Department of Education
- The feasibility of the development of a national jurisprudence examination for dental assistants, if a uniform national dental assisting model is recognized
- The impact of a defined dental assisting career ladder on dental assistant job satisfaction and retention in the dental assisting profession in states where a dental assisting career ladder exists and where educational and credentialing requirements must be met to ascend along the consecutive "rungs" of the ladder

For Dental Assistants

For dental assistants, the ADAA/DANB Alliance's recommendations include supporting efforts to elevate the dental assisting profession by becoming DANB-Certified and contributing to the discussion of a uniform national dental assisting model through involvement in local, state, and national dental assisting associations.

For DANB and the ADAA

The members of the ADAA/DANB Alliance recommend that their parent organizations, DANB and the ADAA, continue their work in support of the establishment of a uniform, nationally recognized model for the dental assisting profession that can serve as a national career ladder for dental assistants. Specifically, the ADAA/DANB Alliance recommends that each organization do the following:

- Disseminate this position paper to the appropriate authorities and other communities of interest
- Provide additional information to communities of interest upon request
- Pursue further research as recommended by this paper, including research into the following areas:
 - The assignment of dental assisting duties not included in the DANB/ADAA Core Competencies Study to the appropriate category (A, B, C, or D) within the proposed uniform national dental assisting model
 - The impact of an existing dental assisting career ladder on dental assistant job satisfaction and long-term retention in selected states

- The feasibility of the development of a basic skills competency examination for dental assistants, including the investigation of non-ADA-accredited dental assisting education as a possible eligibility pathway
- The feasibility of the development of a national jurisprudence examination for dental assistants, if a uniform national dental assisting model is recognized
- Publicize future developments in the establishment of a uniform national dental assisting model to the dental assisting community and the general public

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**Appendix 1:
DANB/ADAA Dental Assisting Core Competencies Study**

**ADAA/DANB Alliance
June 15, 2005**

BACKGROUND

In 2000, the Dental Assisting National Board, Inc. (DANB) and the American Dental Assistants Association (ADAA) formed a joint committee, the ADAA/DANB Alliance (formerly the ADAA/DANB Ad Hoc Committee to Enhance the Dental Assisting Profession). This committee has met twice a year since its inception. It has been addressing many issues of interest to the dental assisting profession, primarily to develop a ranking of core competencies for dental assistants from most basic (entry level) to most complex (the expanded functions level).

The purpose of the current study by the ADAA/DANB Alliance is to define and rank core dental assisting competencies in support of one national set of dental assisting tasks, levels, and minimum requirements to perform these tasks, and to reinforce the concept of a viable career ladder for dental assistants. Defining one set of national core dental assisting tasks, levels, and requirements will help states address access to oral health care issues. In *Oral Health in America: A Report of the Surgeon General*, published in May 2000, then United States Surgeon General David Satcher, MD, PhD discussed a silent epidemic of oral diseases, and asked oral healthcare professionals to work together to “remove known barriers that stand between people and oral health services.” Defining a national set of dental assisting tasks and requirements to perform those tasks will enable dentists to delegate identified tasks to dental assistants who have met educational/training requirements and have demonstrated competency on the tasks. This will allow dentists to focus on dentistry and assistants to perform delegated duties, with appropriate education, training, and credentialing, if required, thus increasing access to care. Defining the duties of dental assistants, identifying educational/training requirements and providing a legally defensible and psychometrically sound way to demonstrate competency will strengthen the dental team, making it more efficient and better able to meet the oral health care needs of the public.

The current study consists of four phases. During Phase I, Certified Dental Assistants (CDAs) and Directors from dental assisting programs accredited by the American Dental Association’s (ADA’s) Commission on Dental Accreditation (CoDA) were surveyed. Non-Certified assistants were surveyed during Phase II. During Phase III, dentists were surveyed. CDAs and Program Directors from ADA-accredited dental assisting programs were resurveyed using an updated rating scale during Phase IV.

DATA AND METHODS

Instrument

DANB's General Chairside Exam Committee developed the Core Competency Survey during its fall 2001 annual meeting, based on task development groundwork accomplished by the ADA/DANB Alliance in Fall 2000, using DANB's Task Analysis as a reference point. The General Chairside Exam Committee is composed of two CDAs, two dentists, a DANB Board of Directors representative, and DANB's psychometrician, with all oral healthcare content expert members on this Committee representing different areas of the country with a mix of clinical and didactic work experience. Together they developed definitions for different levels of dental assisting to be used in the survey. Additionally, the committee reviewed the ADA/DANB Alliance's list of major tasks performed by dental assistants of all levels.

Phase I of the Alliance's work surveyed CDAs and program directors from ADA-accredited dental assisting programs. The second phase surveyed non-Certified assistants. The survey used for Phases I and II included 70 tasks. Below are the category definitions used for Phases I and II:

- **Entry level (Entry)** No minimum education, training, or experience should be required (though the task may require a short orientation in order to perform it).
- **Dental Assistant level (DA)** Up to 12 months of formal education or training, OR less than 2 years full-time or up to 4 years part-time dental assisting work experience. (These tasks are appropriate for relatively new on-the-job-trained assistants (OJTs) and students currently enrolled in a formal dental assisting education program.)
- **Certified Dental Assistant (CDA)/Registered Dental Assistant (RDA) level (CDA/RDA)** At least 12 months of formal education or training OR 2+ years of full-time or 4+ years of part-time work experience (or some combination of full- and part-time experience). (These tasks are appropriate for dental assistants who have completed a formal dental assisting education program or who are highly experienced OJTs.)
- **Expanded Functions Dental Assistant (EFDA) level (EFDA)** Specific, advanced education or training required in addition to or beyond the CDA/RDA level.

These categories were changed for Phases III and IV. The words used to describe the categories for Phases I and II already have predefined meanings to individuals in the dental profession. For Phases III and IV, we wanted to make the categories more generic. We attempted to do this by using the following category descriptions:

- **Category A:** These are the most basic dental assisting tasks: No minimum experience, training, or education should be required to perform the task (though the task may require a short orientation in order to perform it); that is, in order to perform a Category A task, the assistant needs only to be provided with short, one-time verbal instructions or read a short instruction sheet.
- **Category B:** These tasks are of low to moderate complexity, requiring less than 2 years full-time or up to 4 years part-time dental assisting work experience OR up to 12 months of formal education or training in order to perform this task. Tasks in Category B are appropriate for relatively new OJTs and students currently enrolled in a formal dental assisting education program.
- **Category C:** These tasks are of moderate complexity, requiring 2+ years of full-time or 4+ years of part-time work experience (or some combination of full and part time experience) OR at least 12 months of formal education or training. (Tasks in Category C are appropriate for dental assistants who have completed a formal dental assisting education program or who are highly experienced OJTs.)
- **Category D:** These tasks are most complex. In order to perform Category D tasks, the dental assistant would require specific, advanced education or training in addition to or beyond the level required for Category C tasks.

The same tasks that were used in Phase I and II of the research project were used for Phases III and IV with one clarification. The first version of the survey included the task 'Write prescriptions.' For Phases III and IV this task was rewritten to read 'Phone in prescriptions at the direction of the dentist.' The entire survey is located in Appendix A.

Sample

All participants received a Core Competency Survey packet containing a welcome letter (including instructions), survey (containing 70 tasks), and a demographic survey/questionnaire. A description of the predefined categories (A, B, C, D) to classify the tasks was provided to each participant. Participants were instructed to rate each task in terms of the training, education, and/or experience they believe **should be**

required to perform it (what should be required, not what is currently required according to the dental practice act in the survey respondent's state).

Dentists

During the week of November 17, 2003 a total of 5,000 Core Competency Survey packets were mailed (see Appendix A) to a stratified (by state) random sample of dentists from the ADA mailing list. In entering the demographic data and comments from the Phase III surveys, DANB staff noted that in some instances dental assistants completed the survey instead of the dentists. DANB staff members were able to identify 26 surveys that were completed by assistants (because assistants indicated on the survey that they completed it in place of their employers). These surveys were pulled out and the analysis was run without them.

The survey of dentists had a return rate of 11%. A total of 544 completed surveys were returned to DANB. An additional 205 incomplete surveys were returned due to incorrect addresses. Not all participants returned the demographic portion of the survey; a total of 527 demographic surveys were returned. The majority of dentists are in private practice (97%), practicing general dentistry (82%). Eighty-six percent (86%) have been in practice for more than 10 years. The responding private practitioner dentists employed an average of 2.8 dental assistants and an average of 1.7 dental hygienists.

Certified Dental Assistants

In January 2005, a total of 2,500 Core Competency Survey packets (see Appendix B) were mailed to a stratified (by state) random sample of CDAs. A total of 728 completed surveys were returned to DANB from CDAs. An additional two incomplete surveys were returned due to incorrect addresses. The survey of CDAs had a return rate of 29%. Not all participants returned the demographic portion of the survey; a total of 724 demographic surveys were returned.

The majority of the participants are in private practice (78%), employed by dentists practicing general dentistry (71%). Fifty-eight percent (58%) have been dental assistants for more than 10 years. Fifty-eight percent (58%) believe that their employer supports Certification.

Directors of ADA-Accredited Dental Assisting Programs

In January 2005, 236 directors of ADA-accredited dental assisting programs received a Core Competency Survey packet (see Appendix C). A total of 112 completed surveys were returned to DANB from these educators. No surveys were returned due to incorrect addresses. The survey of Program Directors had a return rate of 41%. Not all participants returned the demographic portion of the survey; a total of 110 demographic surveys were returned.

Eighty-four percent (84%) of respondents have been in practice as dental assisting educators for more than 10 years. Sixty-three percent (63%) believe that their employer (educational institution) supports certification.

Non-Certified Dental Assistants

A postcard briefly describing the project was mailed (see Appendix D) to a random sample of 2,500 dental offices (stratified by state) in an attempt to reach non-Certified Dental Assistants (non-CDAs). The postcards were addressed generically 'to the dental assistant' at each office. Fifty-eight (2%) assistants requested surveys after receiving the postcard. A total of 31 completed surveys were returned to DANB from dental offices where we were trying to reach non-CDAs. Of the 31 surveys, 24 surveys were from non-CDAs; the other seven were from CDAs. An additional 265 postcards were returned due to incorrect addresses. Due to the small number of surveys from non-CDAs, the data from this small group will not be included in the overall analysis.

Tables and graphs of all demographic information are available upon request. Memoranda inviting CDAs, Program Directors, and non-CDAs to participate in Phase IV of this study can be found in Appendix B, C, and D, respectively.

Measurement Model Used for the Analysis

The Partial Credit Rasch Model was used to analyze the data (Andrich, 1978).

$$\log (P_{nik} / P_{ni(k-1)}) = B_n - D_i - F_k$$

where

P_{nik} = the probability that survey respondent n , on encountering task i would be observed (or would respond) in category k ,

$P_{ni(k-1)}$ = the probability that the observation (or response) would be in category $k-1$,

B_n = the measure of respondent n ,

D_i = the difficulty of item i ,

F_k = the impediment to being observed in category k relative to category $k-1$, i.e., the k^{th} step calibration, where the categories are numbered $0, m$

This model allows us to transform raw scores from our survey into an equal interval scale of dental assisting tasks. The Rasch Model transforms raw scores into logits (referred to in this report as difficulty measures). Difficulty measures usually range from -4.0 to $+4.0$, with -4.0 representing the easiest tasks and $+4.0$ representing the hardest tasks.

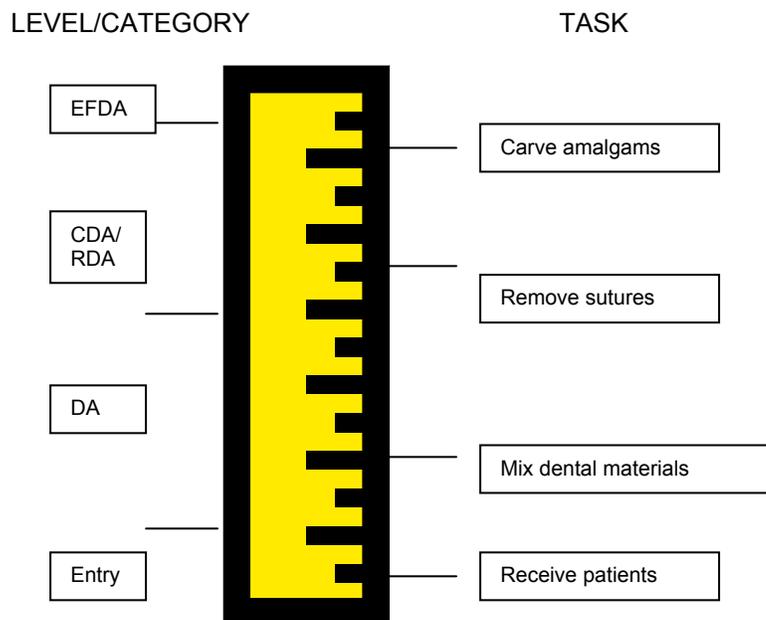
Additionally, the Rasch Model provides us with statistics on the four categories we used to rate the 70 tasks in our survey. When using a rating scale with four categories, there are three ordered 'steps' between categories (see example below).

Example of ordered 'steps' between rating scale categories

Category A		Category B		Category C		Category D
	Step 1		Step 2		Step 3	

When using the Rasch Model the 'steps' between categories are not assumed to be equal interval units. This means that the difference between Category A and Category B is not assumed to be the same as the difference between Category B and Category C. If we used raw scores, we would assume equal interval units between all categories. The Rasch Model allows us to calculate the actual 'steps' used in our rating scale.

The Rasch Model creates a linear scale that allows us to make quantitative comparisons among respondents, tasks, and rating scale categories. Our goal in using the Rasch Model is to create a "ruler" of dental assisting levels. All respondents, dental assisting tasks, and rating scale categories can be placed on one ruler, as illustrated in the following example:



RASCH ANALYSIS

The following steps were followed in the data analysis process:

- Review the functioning of the rating scale
- Review item fit, person fit, and reliability
- Compare groups (Dentists, CDAs, Program Directors)
- Report Results

It is essential to ensure that a survey's rating scale is working properly. Conceptually, the rating scale used for the present survey appears to have a common step structure (from most basic to most complex). We must verify that respondents are using the rating scale as intended and that it is functioning properly (that is, that each category definition is understood consistently by the respondents). Table 1 below indicates that the rating scale was used properly. The respondents used all categories. In addition, because the fit statistics are around 1.0 (as is explained later) and the step calibrations increase with each category level, this indicates that the rating scale is working well (Linacre, 2002).

Table 1: SUMMARY OF CATEGORY STRUCTURE. Model = "R"

Category		Observed		Obsvd Avrge	Sample Expect	Infit MNSQ	Outfit MNSQ	Structure Calibration	Cate- gory Measure
Label	Score	Count	%						
1	1	11853	14	-2.47	-2.47	1.01	1.01	None	(-3.64)
2	2	31672	39	-.74	-.71	.95	.94	-2.50	-1.14
3	3	24860	30	.85	.78	.94	.93	.28	1.27
4	4	12300	15	2.22	2.29	1.10	1.11	2.22	(3.42)
MISSING		1527	2	.09					

A Entry
B DA
C CDA/RDA
D EFDA

Next we reviewed the fit of tasks and respondents. Fit typically refers to how well the collected data match our expectations. For instance, on an examination we expect that the more able students will get harder items correct more often than less able students. Sometimes a very able student makes a careless or unexpected error on an easy item. We call this misfit. Sometimes a person of low ability guesses correctly on a hard item. We call this misfit as well. When considering the Core Competency Survey, misfit is interpreted in a somewhat different manner. Our expectation is that respondents use the category labels in a consistent manner. If an item elicits responses in an inconsistent manner it may mean that the task was not clear and/or meant something different to different participants in the survey.

Fit values ranging from 0.6 to 1.4 logits have been recommended as measures of good fit (Wright & Linacre, 1994). With the present survey we took a slightly more conservative approach, using a range of 0.7 to 1.3 logits to demonstrate fit.

Eight (8) tasks were removed from the analysis because of misfit. The 8 tasks are listed in Table 2 below.

Table 2: Misfitting Tasks

Task #	Task Description
1	Perform mouth mirror inspection of the oral cavity
3	Phone in prescriptions at the direction of the dentist
5	Complete laboratory authorization forms
7	Perform routine maintenance of dental equipment
10	Apply effective communication techniques with a variety of patients
12	Place amalgam for condensation by the dentist
60	Maintain emergency kit
67	Respond to basic medical emergencies

The person reliability measure was .96. This measure is analogous to Cronbach's alpha (an accepted measure of reliability). The task reliability measure was 1.0, which is an estimate of the reproducibility of task placement along the construct of dental assisting tasks. These high reliability measures indicate that the tasks used on the survey created a construct of dental assisting tasks that is reproducible, with the tasks spread out and the respondents separated along the construct.

After ensuring the rating scale was working properly and misfitting items and respondents were removed, we compared results from our three groups of survey respondents. An analysis was run separately for each group anchoring the rating scale calibrations.

We found six tasks that differed with statistical significance between CDAs and dentists. The tasks are listed in Table 3 below.

Table 3: Task Measures That Significantly Differ Between CDAs and Dentists

Task #	Task Name	CDA Measure	DDS Measure	Logit Difference
8	Monitor and respond to post-surgical bleeding	0.66	1.31	-0.65
13	Remove sutures	0.94	0.37	0.57
46	Take final impressions	1.91	2.44	-0.53
65	Recognize basic medical emergencies	-0.93	-0.22	-0.71
68	Respond to basic dental emergencies	-0.31	0.39	-0.70
70	Place stainless steel crowns	2.00	2.96	-0.96

Five of the six tasks were rated more basic by CDAs than dentists, while only one task was rated more complex by CDAs than dentists (task shaded in Table 3). Three of the tasks that dentists rated as requiring more education/training than CDAs did have to do with medical and/or dental emergencies (including post-surgical bleeding). The dentists may have rated these tasks as more complex because they are ultimately responsible for their patients, they spent more time in their schooling training in these

areas, and the incorrect performance of these tasks could have dire consequences for their patients. The remaining two tasks of the five that CDAs rated as more basic than dentists did are (46) Take final impressions and (70) Place stainless steel crowns. Dentists may have rated these as more complex because they consider these tasks to be relatively permanent procedures that impact final treatment outcome.

Analysis was conducted to identify the above items and to determine if the differences noted above will interfere with the development of our scale of complexity of dental assisting tasks. Based on the comparison of person measures with and without the identified items, it was determined that the differences will not interfere with scale development.

We found 10 items that differed significantly between CDAs and Program Directors (PDs). These items are listed in Table 4 below.

Table 4: Task Measures That Significantly Differ Between CDAs and PDs

Task #	Task Name	CDA Measure	PD Measure	Logit Difference
9	Perform coronal polishing procedures	0.90	1.41	-0.51
17	Identify features of rotary instruments	-1.18	-1.81	0.63
18	Apply topical fluoride	-1.49	-0.15	-1.34
19	Select and manipulate gypsums and waxes	-0.62	-1.29	0.67
22	Expose radiographs	-0.48	0.27	-0.75
23	Evaluate radiographs for diagnostic quality	1.19	0.67	0.52
35	Place periodontal dressings	1.74	1.13	0.61
46	Take final impressions	1.91	2.81	-0.90
51	Carve amalgams	3.02	4.08	-1.06
56	Apply topical anesthetic to the injection site	-1.63	-0.86	-0.77

Six of the tasks were rated more basic by CDAs than Program Directors, while four tasks rated more complex by CDAs than Program Directors (tasks shaded in Table 4). The six tasks rated as requiring more education/training by Program Directors are all dental assisting functions that are regulated by most states. Program Directors may be more aware of state law and requirements than CDAs. If true, this factor may have had an effect on their ratings.

Four of the five items rated as more complex by CDAs are included in the curriculum of ADA-accredited schools. Because the Program Directors know the information is being taught, they may view this information as relatively basic or straightforward. CDAs, not all of whom have graduated from an ADA-accredited dental assisting program, may not have received instruction in these tasks or may find it difficult to apply their knowledge in actual practice.

The only item rated more complex by CDAs than Program Directors that does not fit these patterns is (35) Place periodontal dressings. This is considered an expanded function in some states. The Program Directors may view it as a relatively basic function, while the CDAs, in practice, may not be allowed by law to perform it in their state, or may find it relatively difficult to accomplish if they are allowed to perform it.

Analysis was conducted to identify the above items and to determine if the differences noted above will interfere with the development of our scale of dental assisting tasks. Based on the comparison of person measures with and without the identified items, it was determined that the differences will not interfere with scale development.

We found 22 tasks that differed significantly between dentists and Program Directors. The tasks are listed in Table 5 below.

Table 5: Task Measures That Significantly Differ Between Dentists and PDs

Task #	Task Name	Dentist Measure	PD Measure	Logit Difference
4	Receive and prepare patients for treatment, including seating, positioning chair, and placing napkin	-5.48	-4.64	-0.84
6	Place and remove retraction cord	1.26	1.78	-0.52
8	Monitor and respond to post-surgical bleeding	1.31	0.56	0.75
9	Perform coronal polishing procedures	0.63	1.41	-0.78
17	Identify features of rotary instruments	-1.18	-1.81	0.63
18	Apply topical fluoride	-1.63	-0.15	-1.50
19	Select and manipulate gypsums and waxes	-0.65	-1.29	0.64
22	Expose radiographs	-0.70	0.27	-0.97
25	Perform sterilization and disinfection procedures	-2.38	-1.75	-0.63
26	Provide pre- and post-operative instructions	-1.71	-1.19	-0.52
31	Identify intraoral anatomy	0.28	-0.60	0.88
35	Place periodontal dressings	1.75	1.13	0.62
37	Take and record vital signs	-0.98	-1.67	0.69
38	Monitor vital signs	-0.35	-0.98	0.63
39	Clean and polish removable appliances and prostheses	-1.52	-0.98	-0.54
43	Size and fit stainless steel crowns	1.99	1.25	0.74
51	Carve amalgams	3.07	4.08	-1.00
55	Remove temporary fillings	1.98	1.34	0.64
56	Apply topical anesthetic to the injection site	-1.76	-0.86	-0.90
65	Recognize basic medical emergencies	-0.22	-0.81	0.59
68	Respond to basic dental emergencies	0.39	-0.29	0.68
70	Place stainless steel crowns	2.96	1.73	1.23

Ten of the tasks were rated more basic by dentists than Program Directors, while twelve tasks were rated more complex by dentists than Program Directors (tasks shaded in Table 5). Five of the 12 tasks rated more complex by dentists relate in some way to managing or preventing emergencies: (8) Monitor and respond to post-surgical bleeding; (37) Take and record vital signs; (38) Monitor vital signs; (65) Recognize basic medical emergencies; and (68) Respond to basic medical emergencies. We speculate that the reason that dentists rated these as more complex for assistants than the Program Directors did may be because if an assistant incorrectly performed these tasks, this performance could result in dire consequences for the patient.

Four of these 12 tasks rated as more complex by dentists than Program Directors are considered expanded functions in some states. It is hard to say whether some dentists may view these as being more complicated because of this, or if it is harder to perform them than it is to teach dental assistants how to perform them. They are: (35) Place periodontal dressings; (43) Size and fit stainless steel crowns; (55) Remove temporary fillings; and (70) Place stainless steel crowns.

One of these 12 tasks – (31) Identify intraoral anatomy – is likely to be considered more complex by dentists than by Program Directors because the vast majority of dental assistants employed nationwide are on-the-job trained. Most of them have not studied intraoral anatomy, so this could be why the dentists perceive this task as more complex for the majority of their (OJT) assistants. In contrast, the Program Directors provide formal education to assistants, and may therefore view the identification of intraoral anatomy as less complex than the dentists do, who are interacting primarily with OJT assistants.

We have no explanation for why dentists rated the last two of these 12 tasks – (17) Identify features of rotary instruments and (19) Select and manipulate gypsums and waxes – as more complex than the Program Directors did.

In contrast, 10 of the 22 tasks rated significantly differently by dentists and Program Directors, are rated more complex by Program Directors than by Dentists.

Six of the 10 tasks rated as more complex by Program Directors than by dentists are considered expanded functions in some states. It is hard to say whether some Program Directors view these as being more complicated because of this, or if it is harder to teach dental assistants to perform these tasks than it is actually to perform them in practice. They are: (6) Place and remove retraction cord; (9) Perform coronal polishing procedures; (18) Apply topical fluoride; (22) Expose radiographs; (51) Carve amalgams; and (56) Apply topical anesthetic to the injection site.

One task – (25) Perform sterilization and disinfection procedures – might be considered more complex by Program Directors than dentists because the Program Directors may be considering all the microbiological knowledge behind this task that they must impart, while the dentists may only be considering how to operate sterilization machines (autoclave, chemclave) or how to apply disinfectant solution.

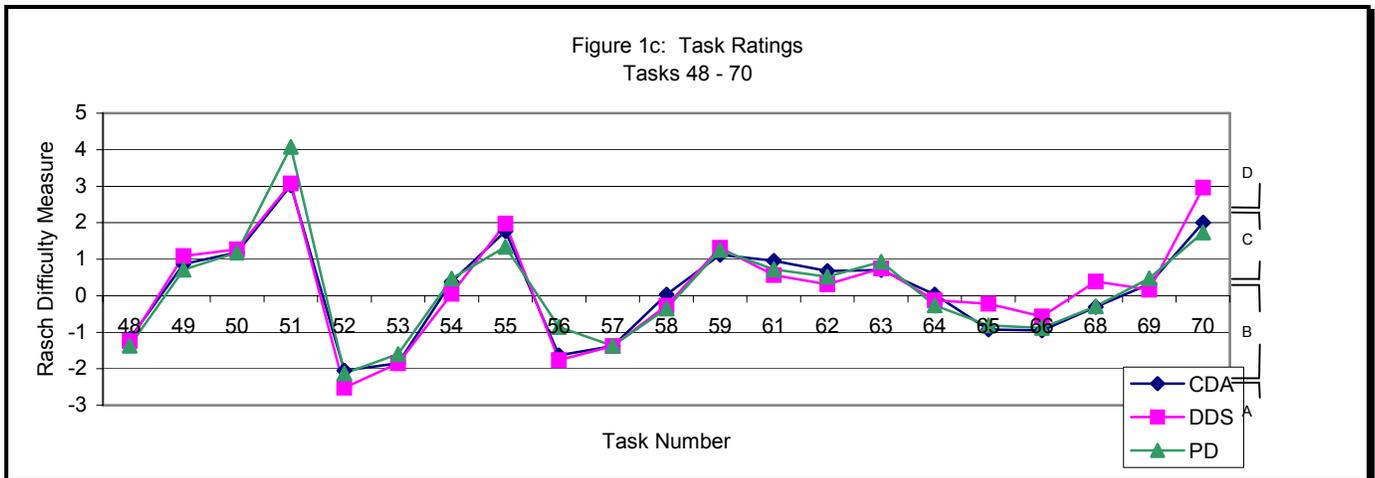
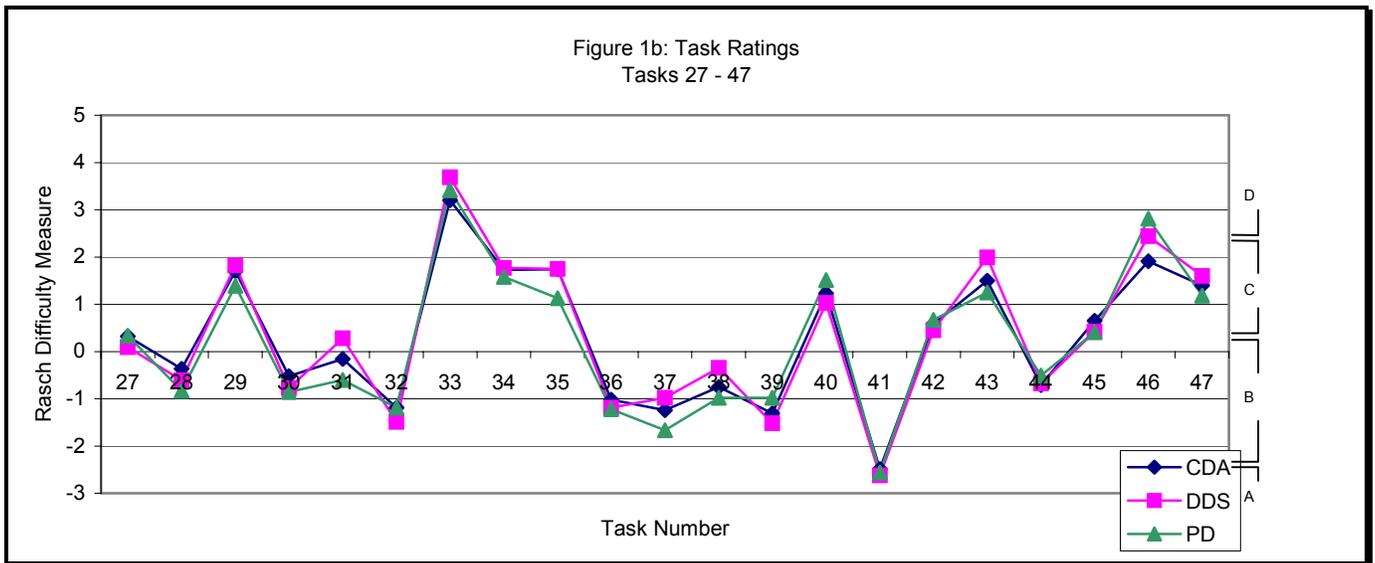
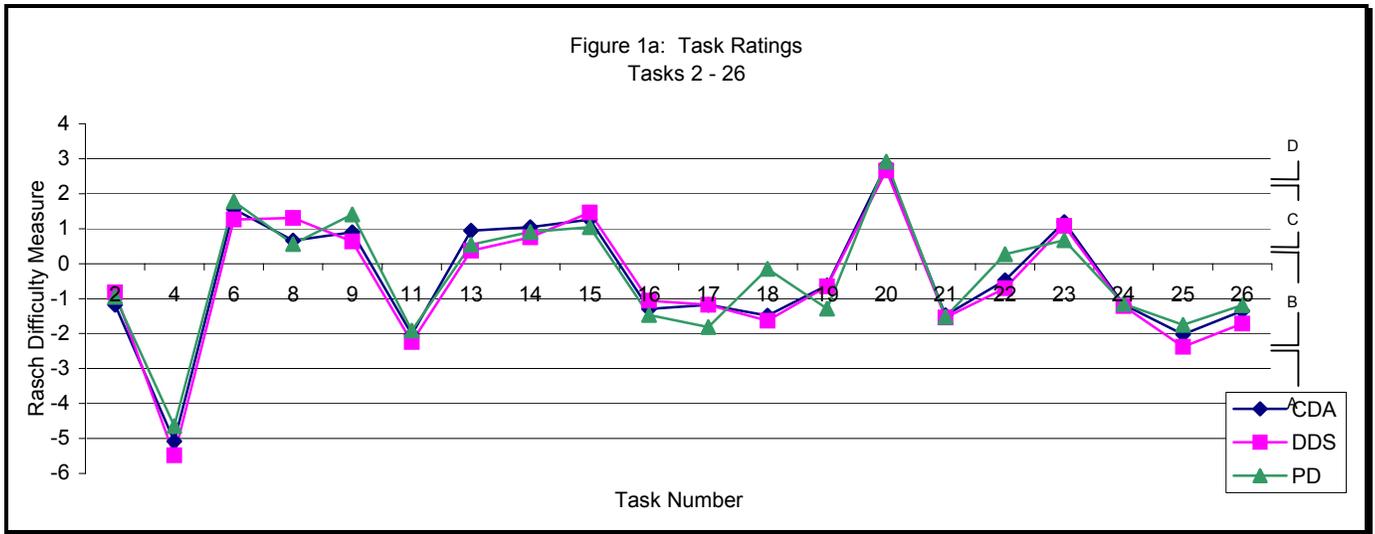
One task – (26) Provide pre- and post-operative instructions – might be considered more complex by Program Directors than dentists because the Program Directors may be considering all the wide variety of instructions that might need to be given to various patients pre- and post-operatively, while the dentists may only allow their assistants to provide these instructions in very limited situations.

We have no explanation for why Program Directors rated the last two of these 10 tasks – (4) Receive and prepare patients for treatment and (39) Clean and polish removable appliances and prostheses – as more complex than the dentists did.

Analysis was conducted to identify the above items and to determine if the differences noted above will interfere with the development of our scale of dental assisting tasks. Based on the comparison of person measures with and without the identified items, it was determined that the differences will not interfere with scale development.

The largest differences between groups appeared when comparing the results of Program Directors with results from both CDA and dentist respondents. This could be occurring for several reasons. Not all CDAs have graduated from ADA-accredited dental assisting programs; many CDAs have been trained on-the-job. There may be some tasks that are easy to master in a classroom, but difficult to perform in the field. Also, there may be some areas that are difficult to master in a classroom but are quickly learned in a dental office.

While there were differences noted between all combinations of the three groups, the differences were determined not to compromise respondent measure interpretation. **It is interesting to note that while differences did exist, the direction of task difficulties were the same for all three groups.** This is displayed in the following three graphs (Figures 1a – 1c).



Final Results\Discussion

As a whole, our results indicate there are two main levels of dental assisting (Category B, or the DA level, and Category C, or the CDA/RDA level), along with a corresponding subset of specialized functions. The results from the Core Competency Survey indicate that only two functions – (4) Receive and prepare patients for treatment and (41) Prepare procedural trays/armamentaria set-ups – should be classified as Category A (most basic tasks – no minimum experience, training, education or competency assessment should be required).

Approximately half of the tasks (33 of the 62 tasks after misfitting items were removed) are classified as Category B (low to moderate complexity – requiring less than 2 years full-time or 4 years part-time dental assisting work experience OR up to 12 months of formal education or training). For tasks in this category, the research supports the contention that a credential less than the full CDA be recommended to perform these tasks. Passing DANB’s RHS and ICE exams, and a state-specific jurisprudence exam or state-specific exams on a few of these functions, currently considered to be ‘expanded’ duties in some states, may fulfill the requirements for this category.

Approximately one third of the tasks (23 of the 62 tasks after misfitting items were removed) are classified as Category C (moderate complexity – requiring 2+ years of full-time or 4+ years of part-time dental assisting work experience OR at least 12 months of formal education or training). For tasks in this category, these results support the contention that successful performance on DANB’s CDA exam (comprised of three component exams, Radiation Health & Safety, Infection Control and General Chairside Assisting) be recommended before performing these tasks. In lieu of the CDA exam, a state might opt to require a state-specific RDA exam, which could meet public protection needs as long as it were developed and administered in accordance with nationally accepted psychometric methods, principles, and standards.

Four tasks are classified as Category D (most complex – specific advanced education or training required). For tasks in this category, the research results would support advanced competency testing to evaluate an assistant’s ability to perform these four expanded functions. Table 6 (on the following page) shows the complete list of tasks and the category into which each one falls.

Table 6: Tasks Ordered from Most Basic to Most Complex

Survey Task #	Task Name	Difficulty Measure	Category
33	Place, cure and finish composite resin restorations	3.40	D
51	Carve amalgams	3.09	D
20	Perform supragingival scaling	2.76	D
70	Place stainless steel crowns	2.33	D
46	Take final impressions	2.18	C
55	Remove temporary fillings	1.81	C
34	Place liners and bases	1.73	C
29	Size and place orthodontic bands and brackets	1.72	C
35	Place periodontal dressings	1.69	C
43	Size and fit stainless steel crowns	1.66	C
47	Fabricate and place temporary crowns	1.46	C
6	Place and remove retraction cord	1.45	C
15	Tie in archwires	1.31	C
50	Place temporary fillings	1.21	C
59	Monitor nitrous oxide/oxygen analgesia	1.20	C
40	Apply pit and fissure sealants	1.17	C
23	Evaluate radiographs for diagnostic quality	1.10	C
49	Perform vitality tests	0.94	C
14	Dry canals	0.92	C
8	Monitor and respond to post-surgical bleeding	0.90	C
9	Perform coronal polishing procedures	0.84	C
61	Remove permanent cement from supragingival surfaces	0.78	C
63	Place post-extraction dressings	0.73	C
13	Remove sutures	0.69	C
42	Place orthodontic separators	0.54	C
45	Place and remove matrix bands	0.54	C
62	Remove periodontal dressings	0.52	C
69	Remove post-extraction dressings	0.27	B
54	Remove temporary crowns and cements	0.26	B
27	Place and remove dental dam	0.23	B
31	Identify intraoral anatomy	-0.03	B
68	Respond to basic dental emergencies	-0.04	B
64	Fabricate custom trays, to include impression and bleaching trays, and athletic mouthguards	-0.05	B
58	Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants	-0.12	B
22	Expose radiographs	-0.50	B
28	Pour, trim, and evaluate the quality of diagnostic casts	-0.50	B
38	Monitor vital signs	-0.62	B
30	Using the concepts of four-handed dentistry, assist with basic restorative procedures, including prosthodontics and restorative dentistry	-0.64	B
65	Recognize basic medical emergencies	-0.65	B
44	Take preliminary impressions	-0.68	B

Table 6: Continued

19	Select and manipulate gypsums and waxes	-0.69	B
66	Recognize basic dental emergencies	-0.80	B
2	Chart existing restorations or conditions	-1.03	B
36	Demonstrate understanding of the OSHA Bloodborne Pathogens Standard	-1.10	B
24	Provide patient preventive education and oral hygiene instruction	-1.18	B
37	Take and record vital signs	-1.18	B
16	Demonstrate knowledge of ethics/jurisprudence/patient confidentiality	-1.22	B
48	Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.	-1.22	B
17	Identify features of rotary instruments	-1.24	B
32	Demonstrate understanding of the OSHA Hazard Communication Standard	-1.30	B
39	Clean and polish removable appliances and prostheses	-1.35	B
57	Demonstrate understanding of the Centers for Disease Control and Prevention Guidelines	-1.38	B
18	Apply topical fluoride	-1.41	B
26	Provide pre- and post-operative instructions	-1.46	B
21	Mix dental materials	-1.50	B
56	Apply topical anesthetic to the injection site	-1.60	B
53	Mount and label dental radiographs	-1.83	B
11	Transfer dental instruments	-2.09	B
25	Perform sterilization and disinfection procedures	-2.12	B
52	Process dental radiographs	-2.23	B
41	Prepare procedural trays/armamentaria set-ups	-2.54	A
4	Receive and prepare patients for treatment, including seating, positioning chair, and placing napkin	-5.14	A

COMMENTS

Many of our participants provided comments both positive and negative on their surveys. A copy of all comments is available upon request.

FUTURE DIRECTIONS

DANB and ADAA are now developing a 'white paper' (position paper) defining core competencies for dental assistants and recommending minimum requirements for performing these competencies, to be provided to these audiences:

1. State boards of dentistry, state dental associations, organized dentistry (i.e., American Dental Assistants Association state and local organizations, American Dental Association, American Dental Education Association, Academy of General Dentistry, American Association of Oral and Maxillofacial Surgery, American Association of Orthodontists, etc.), dental-related corporations, ADA-accredited dental schools and dental assisting programs, other (non-ADA-accredited) dental assisting programs, high school tech-prep coordinators/work force educators, and other groups as appropriate.
2. And, on request, to members of the oral healthcare team (specifically dentists), high school career counselors, and consumers.

Both organizations plan to create a Communications Plan to provide information to oral healthcare stakeholders on the levels of Dental Assisting Core Competencies and minimum dental assisting education and credentials recommended by this research. This Communications Plan could include these elements:

- Creating a booklet based on these results to provide as a set of guidelines to those interested in developing a systematic in-office training protocol for dental assistants
- Developing an Executive Summary and providing either the white paper/ position paper or Executive Summary (or both) to media outlets and oral healthcare stakeholders as described in the 'potential audiences' portion of the ADAA/DANB Alliance's prior work
- Submitting for publication to national oral healthcare organizations, including American Dental Association, American Dental Education Association, and Academy of General Dentistry all phases of this Core Competencies research in research paper format
- Developing and distributing press releases, public service announcements, etc. as appropriate and cost-feasible

Ultimately, the results of this research can be used for many purposes, including but not limited to the following:

- Defining and reinforcing the concept of a viable career ladder for dental assistants, thereby enhancing recruitment and increasing retention of these oral healthcare professionals
- Providing an empirically based mechanism for state oral healthcare regulatory bodies to use in defining the practice of dental assisting

- Providing a uniform view of the dental assisting profession, to aid in the development of a standardized professional model to define dental assisting. Standardization will further the goal of a more uniform national standard of care and assist each state dental board in making decisions regarding the potential expansion of dental assisting duties in order to address the 'access to care' issue put forth by the U.S. Surgeon General David Satcher, MD, PhD, in his report, *Oral Health in America: A Report of the Surgeon General* (May 2000).

For more information, including demographic information and respondent comments, contact

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Appendix A

Phase III of the Core Competencies Study
Survey Materials Sent to Dentists
November 2003

MEMORANDUM

November 18, 2003

TO: Selected ADA Members Interested in the Future of the Dental Team

FROM: Cynthia C. Durley, MEd, MBA
Executive Director

RE: Survey of Dental Assisting Core Competencies

Your opinion counts.

To address the current and projected shortage of dental assistants, the retention of existing dental assistants, and access to oral health care issues, the Dental Assisting National Board, Inc. (DANB) and the American Dental Assistants Association (ADAA) Ad Hoc Committee to Enhance the Dental Assisting Profession is working to further define and rank core dental assisting competencies through the enclosed survey.

You have a voice.

The results of this survey will help the ADAA/DANB Ad Hoc Committee to identify and rank dental assisting tasks from most basic to most complex, serving as the basis for the development of a viable career path for dental assistants – a career path that may bring more individuals into the field, reduce turnover, and encourage career development for current assistants.

Your participation in this survey is not an endorsement of licensure, mandatory education or training, or recommendations to change current state dental practice acts or regulations. This is simply a research project whereby the results are anticipated to benefit the entire dental community, promote quality patient care, and support patient accessibility to quality care. If you choose, you may remain anonymous.

Your input is invaluable.

Please read the instructions, complete the survey, and return it in the enclosed postage paid envelope by 12/31/03. We look forward to your response.

Questions or comments?

Call Liz Koch, DANB's Director, Testing and Measurement at 1-800-FOR-DANB, extension 114 or email research@danb.org.

Thank you for your participation.

Turn over for survey instructions

Core Competencies: Survey Directions

Seventy dental assisting tasks or functions are listed randomly below. Please consider each task separately. Rate the **task** in terms of its level of complexity as it relates to the experience, training, and/or education you believe a dental assistant should possess in order to be allowed to perform it. Category A tasks would be considered most basic (least complex), requiring little or no training or education beyond a brief orientation to the task. Category D tasks would be considered most complex, requiring extensive experience, training, or even some formal courses in order to be able to competently perform the task.

Use the following definitions to guide your responses. (Note that 'OJT' refers to an on-the-job-trained dental assistant.)

Category A

These are the most basic dental assisting tasks; No minimum experience, training, or education should be required to perform the task (though the task may require a short orientation in order to perform it); that is, in order to perform a Category A task, the assistant needs only to be provided with short, one-time verbal instructions or read a short instruction sheet.

Category B

These tasks are of low to moderate complexity, requiring less than 2 years full time or up to 4 years part time dental assisting work experience OR up to 12 months of formal education or training in order to perform this task. Tasks in Category B are appropriate for relatively new OJTs and students currently enrolled in a formal dental assisting education program.

Category C

These tasks are of moderate complexity, requiring 2+ years of full time or 4+ years of part time work experience (or some combination of full and part time experience) OR at least 12 months of formal education or training. (Tasks in Category C are appropriate for dental assistants who have completed a formal dental assisting education program or who are highly experienced OJTs.)

Category D

These tasks are most complex. In order to perform Category D tasks, the dental assistant would require specific, advanced education or training in addition to or beyond the level required for Category C tasks.

Appendix A

As you rank these tasks, please keep in mind the following:

- Patient safety is of utmost importance.
- Category A tasks are those that would not be likely to cause harm to a patient if performed by an untrained, inexperienced assistant.
- In contrast, those tasks at the Category D level are those that you believe require the most advanced education, training and/or experience, since a patient could be harmed if the task were performed by an untrained, inexperienced assistant.
- Do not consider what you do or are permitted to do in your office or state. Instead, think of this as an opportunity to define and rank dental assisting tasks that could be applied across the country. **Do not respond to 'what is.'** Respond instead to '**what should be.**'

Appendix A

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants		Category			
Page 1		A	B	C	D
1.	Perform mouth mirror inspection of the oral cavity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	Chart existing restorations or conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	Phone in prescriptions at the direction of the dentist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	Receive and prepare patients for treatment, including seating, positioning chair, and placing napkin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	Complete laboratory authorization forms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.	Place and remove retraction cord	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	Perform routine maintenance of dental equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	Monitor and respond to post-surgical bleeding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	Perform coronal polishing procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	Apply effective communication techniques with a variety of patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11.	Transfer dental instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12.	Place amalgam for condensation by the dentist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13.	Remove sutures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14.	Dry canals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15.	Tie in archwires	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16.	Demonstrate knowledge of ethics/jurisprudence/patient confidentiality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17.	Identify features of rotary instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18.	Apply topical fluoride	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix A

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants	Category			
	A	B	C	D
Page 2				
19. Select and manipulate gypsums and waxes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Perform supragingival scaling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Mix dental materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Expose radiographs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Evaluate radiographs for diagnostic quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Provide patient preventive education and oral hygiene instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Perform sterilization and disinfection procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Provide pre- and post-operative instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Place and remove dental dam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Pour, trim, and evaluate the quality of diagnostic casts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Size and place orthodontic bands and brackets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Using the concepts of four-handed dentistry, assist with basic restorative procedures, including prosthodontics and restorative dentistry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Identify intraoral anatomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Demonstrate understanding of the OSHA Hazard Communication Standard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Place, cure and finish composite resin restorations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Place liners and bases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Place periodontal dressings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Demonstrate understanding of the OSHA Bloodborne Pathogens Standard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix A

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants Page 3	Category			
	A	B	C	D
37. Take and record vital signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Monitor vital signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. Clean and polish removable appliances and prostheses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Apply pit and fissure sealants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. Prepare procedural trays/armamentaria set-ups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. Place orthodontic separators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. Size and fit stainless steel crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. Take preliminary impressions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. Place and remove matrix bands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. Take final impressions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. Fabricate and place temporary crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. Perform vitality tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. Place temporary fillings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. Carve amalgams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. Process dental radiographs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Mount and label dental radiographs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Remove temporary crowns and cements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix A

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants		Category			
Page 4		A	B	C	D
55. Remove temporary fillings		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Apply topical anesthetic to the injection site		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Demonstrate understanding of the Centers for Disease Control and Prevention Guidelines		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. Monitor nitrous oxide/oxygen analgesia		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. Maintain emergency kit		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61. Remove permanent cement from supragingival surfaces		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62. Remove periodontal dressings		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63. Place post-extraction dressings		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
64. Fabricate custom trays, to include impression and bleaching trays, and athletic mouthguards		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
65. Recognize basic medical emergencies		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
66. Recognize basic dental emergencies		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
67. Respond to basic medical emergencies		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68. Respond to basic dental emergencies		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
69. Remove post-extraction dressings		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
70. Place stainless steel crowns		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Core Competencies: Demographic Information

In order to make best use of the data we are collecting during this project, please complete the following information and submit with your survey questionnaires.

1. Please tell us about your practice. I would best describe my practice setting as:

- | | | | |
|--------------------------|-------------------------------|--------------------------|------------|
| <input type="checkbox"/> | Private Practice | <input type="checkbox"/> | Clinic/HMO |
| <input type="checkbox"/> | Hospital | <input type="checkbox"/> | Military |
| <input type="checkbox"/> | State/Municipal Health Dept | <input type="checkbox"/> | Prison |
| <input type="checkbox"/> | Other (Please Explain: _____) | | |

2. Please mark the primary type of dentistry you practice?

- | | | | |
|--------------------------|-------------------|--------------------------|--------------|
| <input type="checkbox"/> | General Dentistry | <input type="checkbox"/> | Endodontic |
| <input type="checkbox"/> | Orthodontic | <input type="checkbox"/> | Oral Surgery |
| <input type="checkbox"/> | Pediatrics | <input type="checkbox"/> | Periodontic |

3. How long have you been practicing dentistry?

- Less than One Year
- One or Two Years
- Three to Five Years
- Five to Ten Years
- Over Ten Years

4. How many dentists work for your practice? _____

5. How many dental assistants work for your practice? _____

6. How many dental hygienists work for your practice? _____

7. In which state is your practice located? _____

Appendix B

Phase IV of the Core Competencies Study
Survey Materials Sent to CDAs
December 2004

MEMORANDUM

December 17, 2004

TO: Selected CDAs and other dental assistants

FROM: Cynthia C. Durley, MEd, MBA
Executive Director

RE: Survey of Dental Assisting Core Competencies

We need your help to develop a career ladder of national core competencies for dental assistants!

In 2000, the Dental Assisting National Board, Inc. (DANB) and the American Dental Assistants Association (ADAA) formed a joint committee, the ADAA/DANB Alliance (formerly the ADAA/DANB Ad Hoc Committee to Enhance the Dental Assisting Profession). This committee has met twice a year since its inception. It has been addressing many issues of interest to the dental assisting profession, primarily to develop a ranking of core competencies for dental assistants from most basic (entry level), to most complex (the expanded functions level).

Why? The United States is becoming a more mobile society. Many states are moving toward recognizing professional credentials earned in other states (known as 'reciprocity,' or 'licensure by credentials'). Currently, there are no national mandatory education or credentialing requirements for dental assistants - every state has its own dental practice act, with its own requirements for dental assistants, which allows assistants to perform various duties within that state. Currently, 36 states recognize or require dental assistants to pass a DANB examination. However, dental assisting functions allowed in each state and requirements to perform these functions may vary greatly.

The ADAA/DANB Alliance is working to define and rank core dental assisting competencies with the hope of supporting one national set of dental assisting tasks, levels, and requirements, and reinforcing the notion of a viable career ladder for dental assistants. State boards of dentistry often contact DANB for such information as they update their state dental practice acts. Your work on this survey will help us to provide important input to the state dental boards, which could ultimately serve to set national dental assisting standards and help to elevate the dental assisting profession.

You have been randomly selected to help the committee with this, the final phases of the survey. Due to the nature of random sampling, some of you may have participated in phases I or II of this study. If that is the case, kindly accept our invitation to participate for a second time. Please read the enclosed instructions to complete the survey. Return it to Chris McManus, DANB Research Coordinator, in the enclosed postage paid envelope by January 15th, 2005. Any questions? Call me at 1-800-FOR-DANB, extension 428, or Chris at extension 444. Thank you for your input.

Turn over for survey instructions

Core Competencies: Survey Directions

Seventy dental assisting tasks or functions are listed randomly below. Please consider each task separately. Rate the **task** in terms of its level of complexity as it relates to the experience, training, and/or education you believe a dental assistant should possess in order to be allowed to perform it. Category A tasks would be considered most basic (least complex), requiring little or no training or education beyond a brief orientation to the task. Category D tasks would be considered most complex, requiring extensive experience, training, or even some formal courses in order to be able to competently perform the task.

Use the following definitions to guide your responses. (Note that 'OJT' refers to an on-the-job-trained dental assistant.)

Category A

These are the most basic dental assisting tasks; No minimum experience, training, or education should be required to perform the task (though the task may require a short orientation in order to perform it); that is, in order to perform a Category A task, the assistant needs only to be provided with short, one-time verbal instructions or read a short instruction sheet.

Category B

These tasks are of low to moderate complexity, requiring less than 2 years full time or up to 4 years part time dental assisting work experience OR up to 12 months of formal education or training in order to perform this task. Tasks in Category B are appropriate for relatively new OJTs and students currently enrolled in a formal dental assisting education program.

Category C

These tasks are of moderate complexity, requiring 2+ years of full time or 4+ years of part time work experience (or some combination of full and part time experience) OR at least 12 months of formal education or training. (Tasks in Category C are appropriate for dental assistants who have completed a formal dental assisting education program or who are highly experienced OJTs.)

Category D

These tasks are most complex. In order to perform Category D tasks, the dental assistant would require specific, advanced education or training in addition to or beyond the level required for Category C tasks.

Appendix B

As you rank these tasks, please keep in mind the following:

- Patient safety is of utmost importance.
- Category A tasks are those that would not be likely to cause harm to a patient if performed by an untrained, inexperienced assistant.
- In contrast, those tasks at the Category D level are those that you believe require the most advanced education, training and/or experience, since a patient could be harmed if an untrained, inexperienced assistant performed the task.
- Do not consider what you do or are permitted to do in your office or state. Instead, think of this as an opportunity to define and rank dental assisting tasks that could be applied across the country. **Do not respond to 'what is.' Respond instead to 'what should be.'**

After we tally all responses, we will compare responses to the prior phases and work to define recommended minimum dental assisting education and examination requirements to perform each level of dental assisting task. If you are interested in receiving an Executive Summary of these results, please include your name and street or e-mail address below (please print or type):

Name: _____

Address: _____

City _____ State _____ Zip _____

Email: _____

Appendix B

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants		Category			
Page 1		A	B	C	D
1. Perform mouth mirror inspection of the oral cavity		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Chart existing restorations or conditions		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Phone in prescriptions at the direction of the dentist		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Receive and prepare patients for treatment, including seating, positioning chair, and placing napkin		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Complete laboratory authorization forms		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Place and remove retraction cord		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Perform routine maintenance of dental equipment		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Monitor and respond to post-surgical bleeding		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Perform coronal polishing procedures		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Apply effective communication techniques with a variety of patients		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Transfer dental instruments		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Place amalgam for condensation by the dentist		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Remove sutures		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Dry canals		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Tie in archwires		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Demonstrate knowledge of ethics/jurisprudence/patient confidentiality		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Identify features of rotary instruments		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Apply topical fluoride		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix B

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants		Category			
Page 2		A	B	C	D
19. Select and manipulate gypsums and waxes		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Perform supragingival scaling		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Mix dental materials		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Expose radiographs		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Evaluate radiographs for diagnostic quality		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Provide patient preventive education and oral hygiene instruction		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Perform sterilization and disinfection procedures		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Provide pre- and post-operative instructions		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Place and remove dental dam		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Pour, trim, and evaluate the quality of diagnostic casts		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Size and place orthodontic bands and brackets		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Using the concepts of four-handed dentistry, assist with basic restorative procedures, including prosthodontics and restorative dentistry		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Identify intraoral anatomy		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Demonstrate understanding of the OSHA Hazard Communication Standard		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Place, cure and finish composite resin restorations		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Place liners and bases		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Place periodontal dressings		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Demonstrate understanding of the OSHA Bloodborne Pathogens Standard		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix B

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants Page 3	Category			
	A	B	C	D
37. Take and record vital signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Monitor vital signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. Clean and polish removable appliances and prostheses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Apply pit and fissure sealants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. Prepare procedural trays/armamentaria set-ups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. Place orthodontic separators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. Size and fit stainless steel crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. Take preliminary impressions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. Place and remove matrix bands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. Take final impressions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. Fabricate and place temporary crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. Perform vitality tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. Place temporary fillings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. Carve amalgams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. Process dental radiographs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Mount and label dental radiographs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Remove temporary crowns and cements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix B

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants	Category			
	A	B	C	D
Page 4				
55. Remove temporary fillings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Apply topical anesthetic to the injection site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Demonstrate understanding of the Centers for Disease Control and Prevention Guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. Monitor nitrous oxide/oxygen analgesia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. Maintain emergency kit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61. Remove permanent cement from supragingival surfaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62. Remove periodontal dressings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63. Place post-extraction dressings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
64. Fabricate custom trays, to include impression and bleaching trays, and athletic mouthguards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
65. Recognize basic medical emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
66. Recognize basic dental emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
67. Respond to basic medical emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68. Respond to basic dental emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
69. Remove post-extraction dressings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
70. Place stainless steel crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Core Competencies: Demographic Information

In order to make best use of the data we are collecting during this project, please complete the following information and submit with your survey questionnaires.

1. Are you a Certified Dental Assistant? Yes No

If yes to #1, please provide your 6 digit Certification Number (located on your DANB wallet card or certificate) ___ ___ ___ ___ ___ ___

2. Please tell us about your practice. I would best describe my practice setting as:

<input type="checkbox"/> Private Practice	<input type="checkbox"/> Clinic/HMO
<input type="checkbox"/> Hospital	<input type="checkbox"/> Military
<input type="checkbox"/> State/Municipal Health Dept	<input type="checkbox"/> Prison
<input type="checkbox"/> University/College	

3. What type of practice do you work for?

<input type="checkbox"/> General Dentistry	<input type="checkbox"/> Endodontic
<input type="checkbox"/> Orthodontic	<input type="checkbox"/> Oral Surgery
<input type="checkbox"/> Pediatrics	<input type="checkbox"/> Periodontic
<input type="checkbox"/> University/College	

4. How long have you been employed as a dental assistant?

Less than One Year
 One or Two Years
 Three to Five Years
 Five to Ten Years
 Over Ten Years

5. Does your employer support certification through increased salaries for Certified Dental Assistants when compared with dental assistants not certified?

Yes No

6. Please provide the name of the state in which you are employed _____

Appendix B

Comments:

Thank you for your participation! Your responses are very important.

Appendix C

Phase IV of the Core Competencies Study
Survey Materials Sent to Program Directors
of ADA-Accredited Dental Assisting Educational Programs
December 2004

MEMORANDUM

December 14, 2004

TO: Program Directors of ADA Accredited Programs

FROM: Cynthia C. Durley, MEd, MBA
Executive Director

RE: Survey of Dental Assisting Core Competencies

We need your help to develop a career ladder of national core competencies for dental assistants!

In 2000, the Dental Assisting National Board, Inc. (DANB) and the American Dental Assistants Association (ADAA) formed a joint committee, the ADAA/DANB Alliance (formerly the ADAA/DANB Ad Hoc Committee to Enhance the Dental Assisting Profession). This committee has met twice a year since its inception. It has been addressing many issues of interest to the dental assisting profession, primarily to develop a ranking of core competencies for dental assistants from most basic (entry level), to most complex (the expanded functions level).

Why? The United States is becoming a more mobile society. Many states are moving toward recognizing professional credentials earned in other states (known as 'reciprocity,' or 'licensure by credentials'). Currently, there are no national mandatory education or credentialing requirements for dental assistants - every state has its own dental practice act, with its own requirements for dental assistants, which allows assistants to perform various duties within that state. Currently, 36 states recognize or require dental assistants to pass a DANB examination. However, dental assisting functions allowed in each state and requirements to perform these functions may vary greatly.

The ADAA/DANB Alliance is working to define and rank core dental assisting competencies with the hope of supporting one national set of dental assisting tasks, levels, and requirements, and reinforcing the notion of a viable career ladder for dental assistants. State boards of dentistry often contact DANB for such information as they update their state dental practice acts. Your work on this survey will help us to provide important input to the state dental boards, which could ultimately serve to set national dental assisting standards and help to elevate the dental assisting profession.

You have been randomly selected to help the committee with this, the final phases of the survey. Due to the nature of random sampling, some of you may

Appendix C

have participated in phases I or II of this study. If that is the case, kindly accept our invitation to participate for a second time. Please read the enclosed instructions to complete the survey. Return it to Chris McManus, DANB Research Coordinator, in the enclosed postage paid envelope by January 15th, 2005. Any questions? Call me at 1-800-FOR-DANB, extension 428, or Chris at extension 444. Thank you for your input.

Turn over for survey instructions

Core Competencies: Survey Directions

Seventy dental assisting tasks or functions are listed randomly below. Please consider each task separately. Rate the **task** in terms of its level of complexity as it relates to the experience, training, and/or education you believe a dental assistant should possess in order to be allowed to perform it. Category A tasks would be considered most basic (least complex), requiring little or no training or education beyond a brief orientation to the task. Category D tasks would be considered most complex, requiring extensive experience, training, or even some formal courses in order to be able to competently perform the task.

Use the following definitions to guide your responses. (Note that 'OJT' refers to an on-the-job-trained dental assistant.)

Category A

These are the most basic dental assisting tasks; No minimum experience, training, or education should be required to perform the task (though the task may require a short orientation in order to perform it); that is, in order to perform a Category A task, the assistant needs only to be provided with short, one-time verbal instructions or read a short instruction sheet.

Category B

These tasks are of low to moderate complexity, requiring less than 2 years full time or up to 4 years part time dental assisting work experience OR up to 12 months of formal education or training in order to perform this task. Tasks in Category B are appropriate for relatively new OJTs and students currently enrolled in a formal dental assisting education program.

Category C

These tasks are of moderate complexity, requiring 2+ years of full time or 4+ years of part time work experience (or some combination of full and part time experience) OR at least 12 months of formal education or training. (Tasks in Category C are appropriate for dental assistants who have completed a formal dental assisting education program or who are highly experienced OJTs.)

Category D

These tasks are most complex. In order to perform Category D tasks, the dental assistant would require specific, advanced education or training in addition to or beyond the level required for Category C tasks.

Appendix C

As you rank these tasks, please keep in mind the following:

- Patient safety is of utmost importance.
- Category A tasks are those that would not be likely to cause harm to a patient if performed by an untrained, inexperienced assistant.
- In contrast, those tasks at the Category D level are those that you believe require the most advanced education, training and/or experience, since a patient could be harmed if an untrained, inexperienced assistant performed the task.
- Do not consider what you do or are permitted to do in your office or state. Instead, think of this as an opportunity to define and rank dental assisting tasks that could be applied across the country. **Do not respond to 'what is.' Respond instead to 'what should be.'**

After we tally all responses, we will compare responses to the prior phases and work to define recommended minimum dental assisting education and examination requirements to perform each level of dental assisting task. If you are interested in receiving an Executive Summary of these results, please include your name and street or e-mail address below (please print or type):

Name: _____

Address: _____

City _____ State _____ Zip _____

Email: _____

Appendix C

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants Page 1	Category			
	A	B	C	D
1. Perform mouth mirror inspection of the oral cavity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Chart existing restorations or conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Phone in prescriptions at the direction of the dentist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Receive and prepare patients for treatment, including seating, positioning chair, and placing napkin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Complete laboratory authorization forms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Place and remove retraction cord	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Perform routine maintenance of dental equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Monitor and respond to post-surgical bleeding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Perform coronal polishing procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Apply effective communication techniques with a variety of patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Transfer dental instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Place amalgam for condensation by the dentist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Remove sutures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Dry canals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Tie in archwires	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Demonstrate knowledge of ethics/jurisprudence/patient confidentiality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Identify features of rotary instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Apply topical fluoride	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix C

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants		Category			
Page 2		A	B	C	D
19. Select and manipulate gypsums and waxes		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Perform supragingival scaling		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Mix dental materials		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Expose radiographs		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Evaluate radiographs for diagnostic quality		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Provide patient preventive education and oral hygiene instruction		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Perform sterilization and disinfection procedures		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Provide pre- and post-operative instructions		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Place and remove dental dam		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Pour, trim, and evaluate the quality of diagnostic casts		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Size and place orthodontic bands and brackets		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Using the concepts of four-handed dentistry, assist with basic restorative procedures, including prosthodontics and restorative dentistry		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Identify intraoral anatomy		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Demonstrate understanding of the OSHA Hazard Communication Standard		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Place, cure and finish composite resin restorations		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Place liners and bases		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Place periodontal dressings		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Demonstrate understanding of the OSHA Bloodborne Pathogens Standard		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix C

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants Page 3	Category			
	A	B	C	D
37. Take and record vital signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Monitor vital signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. Clean and polish removable appliances and prostheses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Apply pit and fissure sealants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. Prepare procedural trays/armamentaria set-ups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. Place orthodontic separators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. Size and fit stainless steel crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. Take preliminary impressions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. Place and remove matrix bands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. Take final impressions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. Fabricate and place temporary crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. Perform vitality tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. Place temporary fillings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. Carve amalgams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. Process dental radiographs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Mount and label dental radiographs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Remove temporary crowns and cements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix C

Survey: Core Competencies and Minimum Proficiency Levels for Dental Assistants	Category			
	A	B	C	D
Page 4				
55. Remove temporary fillings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Apply topical anesthetic to the injection site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Demonstrate understanding of the Centers for Disease Control and Prevention Guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. Monitor nitrous oxide/oxygen analgesia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. Maintain emergency kit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61. Remove permanent cement from supragingival surfaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62. Remove periodontal dressings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63. Place post-extraction dressings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
64. Fabricate custom trays, to include impression and bleaching trays, and athletic mouthguards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
65. Recognize basic medical emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
66. Recognize basic dental emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
67. Respond to basic medical emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68. Respond to basic dental emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
69. Remove post-extraction dressings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
70. Place stainless steel crowns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Core Competencies: Demographic Information

In order to make best use of the data we are collecting during this project, please complete the following information and submit with your survey questionnaires.

1. Are you a Certified Dental Assistant? Yes No

If yes to #1, please provide your 6 digit Certification Number (located on your DANB wallet card or certificate) _____

2. Please tell us about your practice. I would best describe my practice setting as:

- | | |
|--|-------------------------------------|
| <input type="checkbox"/> Private Practice | <input type="checkbox"/> Clinic/HMO |
| <input type="checkbox"/> Hospital | <input type="checkbox"/> Military |
| <input type="checkbox"/> State/Municipal Health Dept | <input type="checkbox"/> Prison |
| <input type="checkbox"/> University/College | |

3. What type of practice do you work for?

- | | |
|---|---------------------------------------|
| <input type="checkbox"/> General Dentistry | <input type="checkbox"/> Endodontic |
| <input type="checkbox"/> Orthodontic | <input type="checkbox"/> Oral Surgery |
| <input type="checkbox"/> Pediatrics | <input type="checkbox"/> Periodontic |
| <input type="checkbox"/> University/College | |

4. How long have you been employed as a dental assistant?

- Less than One Year
- One or Two Years
- Three to Five Years
- Five to Ten Years
- Over Ten Years

5. Does your employer support certification through increased salaries for Certified Dental Assistants when compared with dental assistants not certified?

- Yes No

6. Please provide the name of the state in which you are employed _____

Appendix C

Comments:

Thank you for your participation! Your responses are very important.

Appendix D

Phase II of the Core Competencies Study
Postcard sent to non-CDAs
to solicit participation in the Core Competency Survey
using old category descriptions: Entry, DA, CDA/RDA , & EFDA
December 2002

Phase IV of the Core Competencies Study
The same postcard sent to non-CDAs
to solicit participation in the Core Competency Survey
using new category descriptions: A, B, C & D
December 2004

A postcard was mailed to non-CDAs

Postcard copy:

Dear Dental Assistant:

The Dental Assisting National Board, Inc. (DANB) and the American Dental Assistants Association (ADAA) will be conducting a survey on ranking core competencies in dental assisting. The goal of this survey is to aid in developing a career ladder for dental assistants and to assist state dental boards with revisions of state practice acts. You are being invited to participate in this process. Participation involves completing a 2-page survey.

If you are interested in participating, please call 1-800-367-3262, extension 442 and follow the instructions. We look forward to your participation in this important DANB/ADAA joint project.

If they responded to the postcard, the dental assistants received a cover letter, a core competency survey and a demographics survey.

**Appendix 2:
A National Call to Action to Promote Oral Health,
List of Partnership Network Members**

A National Call to Action to Promote Oral Health

A public-private partnership under the leadership of the Office of the Surgeon General
U.S. Department of Health and Human Services

Partnership Network Members (as of November 2001)

Academy of General Dentistry
American Academy of Pediatric Dentistry
American Academy of Pediatrics
American Association for Dental Research
American Association of Public Health Dentistry
American Association of Women Dentists
American College of Nurse-Midwives
American Dental Association
American Dental Education Association
American Dental Hygienists' Association
American Dental Trade Association
American Medical Association
American Public Health Association
American Society of Dentistry for Children
Association of Academic Health Centers
Association of Clinicians for the Underserved
Association of Maternal and Child Health Programs
Association of Schools of Public Health
Association of State and Territorial Dental Directors
Association of State and Territorial Health Officials
Bureau of Dental Health, New York State Health Department
Campbell Hoffman Foundation
Center for Child Health Research
Children's Defense Fund
Children's Dental Health Project
Children's National Medical Center
Colgate Palmolive Company
Colorado Department of Public Health and Environment Oral Health Program
Connecticut Health Foundation
Consumer Health Care Products Association
Delta Dental Plans Association
DENTSPLY International
Families USA
Family Voices (Federation for Children with Special Needs)
Friends of NIDCR
Grantmakers In Health
Henry Schein, Inc.
Hispanic Dental Association
Illinois Department of Public Health
Maryland Department of Health and Mental Hygiene
Minority Health Communications
National Association of Child Advocates
National Association of Children's Hospitals
National Association of Community Health Centers
National Association of County and City Health Officials
National Association of Local Boards of Health
National Association of State Medicaid Directors
National Association of Urban-Based HMOs
National Conference of State Legislatures
National Dental Association
National Foundation for Ectodermal Dysplasias
National Governors Association
National Health Law Program
National Health Policy Forum
National Maternal and Child Oral Health Resource Center
National Oral Health Policy Center
New York State Department of Health
Oral Health America
Reforming States Group
Research!America
Ronald McDonald House Charities
Special Olympics and Special Olympics University
The Robert Wood Johnson Foundation
Urban Institute Health Policy Center
Washington Dental Service
W.K. Kellogg Foundation
Women's and Children's Health Policy Center

Appendix 3: Excerpts from DANB's Task Analysis, 9th Edition

Content outlines for components of the Certified Dental Assistant (CDA) Exam:

- Radiation Health and Safety (RHS) Exam
- Infection Control Exam (ICE)
- General Chairside Assisting (GC) Exam

Radiation Health and Safety (RHS®) Detailed Content Outline

(37%) I. EXPOSE AND EVALUATE

- A. Select appropriate radiographic technique.
 - 1. Describe use and purpose of various intraoral and extraoral radiographs, such as:
 - a. periapical.
 - b. bitewing.
 - c. occlusal.
 - d. panoramic.
 - e. cephalometric and other extraoral views.
 - 2. Select appropriate radiographic film to examine, view, or survey conditions, teeth, or landmarks, such as:
 - a. caries.
 - b. temporomandibular joint dysfunction.
 - c. periodontal conditions.
 - d. apical pathology.
 - e. sinus areas.
 - f. dental anomalies, such as supernumerary teeth.
 - g. edentulous arches.
 - h. localization of impacted teeth, foreign objects, etc.
 - i. dental implants.
- B. Select appropriate equipment for radiographic techniques.
 - 1. Describe purpose or advantage of accessories for radiographic techniques, including film holders, cotton rolls, film cassettes, intensifying screens, bitewing tabs, bite blocks, lead apron, and thyroid collar.
 - 2. Select appropriate film size and film speed depending on patient characteristics and exposure technique indicated.
 - 3. Storage.
 - a. Inspect and evaluate film storage areas for proper temperature, humidity, radiation protection and inventory control.
 - 1. Identify and correct errors related to improperly storing exposed and unexposed radiographic film.
- C. Select infection control techniques and barriers to minimize cross contamination in the operatory according to ADA/CDC and OSHA guidelines.

- D. Select patient management techniques before, during, and after radiographic exposure.
 - 1. Address patient concerns about x-radiation, including patient refusal of radiography.
 - 2. Describe techniques for patient management while exposing radiographs, including patients with special needs.

- E. Expose dental films, using various techniques.
 - 1. Define radiographic exposure concepts, including:
 - a. film speed.
 - b. kilovoltage.
 - c. milliamperage.
 - d. collimation.
 - e. filtration.
 - f. film density.
 - g. latent image.
 - 2. Intraoral
 - a. Define factors that influence quality of exposure, such as:
 - 1. mA setting.
 - 2. kVp setting.
 - 3. primary beam angles (horizontal and vertical).
 - 4. PID (cone) length.
 - 5. patient or film movement.
 - 6. exposure time.
 - b. Compare paralleling and bisecting angle techniques, including advantages and disadvantages of each.
 - c. Name the parts and functions of an x-ray film packet.
 - 3. Extraoral
 - a. Identify function and maintenance of intensifying screen.
 - b. Describe appropriate technique for exposing
 - 1. panoramic film.
 - 2. cephalometric film.

- F. Demonstrate basic knowledge of digital radiography and other modern imaging techniques.

- G. Evaluate radiographs for diagnostic value.
 - 1. Describe features of a diagnostically acceptable radiograph.
 - 2. Identify and correct errors related to exposing intraoral radiographs, including:
 - a. elongation.
 - b. foreshortening.
 - c. horizontal overlap.
 - d. cone cutting.

- e. light image.
 - f. dark image.
 - g. film bending.
 - h. reverse film (herringbone effect).
 - i. blank (clear) film.
 - j. blurred image.
 - k. superimposed image.
 - l. double exposure.
 - m. saliva leak.
 - n. film placement errors.
3. Identify and correct errors related to exposing panoramic radiographs, including patient positioning errors

(16%) II. PROCESS

- A. Prepare, maintain, and replenish radiographic solutions for manual and automatic processors.
- 1. Describe functions of processing solutions.
 - 2. Describe procedures for maintaining the integrity of processing solutions.
- B. Process exposed intra- and extraoral radiographs by use of manual and automatic techniques.
- 1. Identify optimum conditions and procedures for processing radiographs.
 - 2. Identify and correct errors related to radiographic processing, including:
 - a. spots on film.
 - b. fogging.
 - c. light and dark images.
 - d. clear (blank) film.
 - e. partial images.
 - f. stains.
 - g. discoloration.
 - h. overlapped films.
 - i. air bubbles.
 - 3. Identify and correct errors due to improper film handling, including:
 - a. scratches.
 - b. white or black lines.
 - c. static electricity artifacts.
 - d. fingerprints.
- C. Practice infection control for radiographic processing, following ADA/CDC and OSHA guidelines.

- D. Properly store chemical agents in radiography procedures according to the local regulatory agency, in compliance with the OSHA Hazard Communication Standard.
- E. Properly dispose of all chemical agents and other materials used in dental radiography procedures.
- F. Quality Assurance
 - 1. Implement quality assurance procedures, including daily recording of solution temperatures, dates of solution changes, test film runs, clean and maintain equipment, and knowledge of periodic inspections.

(11%) III. MOUNT AND LABEL

- A. Mount radiographs using buccal (facial) view.
 - 1. Identify anatomical landmarks that aid correct mounting.
 - 2. Match specific tooth views to specified tooth mount windows for an 18 film series.
 - 3. Demonstrate appropriate technique for optimum viewing.
- B. Identify anatomical structures, dental materials and patient information observed on radiographs, including differentiating between radiolucent and radiopaque areas.
- C. Prepare radiographs for legal requirements, viewing, and duplication.
 - 1. Identify methods for duplicating radiography.
 - 2. Identify information that must legally appear on the mount label.
 - 3. Identify reasons for exposing and retaining radiographs.

(24%) IV. RADIATION SAFETY - PATIENT

- A. Apply the principles of radiation protection and health physics and hazards in the operation of radiographic equipment.
 - 1. Demonstrate knowledge of the factors affecting x-ray production, including kVp, mA, and exposure time.
 - a. Describe the characteristics of x-radiation.
 - 2. Demonstrate understanding of x-ray machine factors that influence radiation safety, including concepts of filtration, shielding, collimation, and PID (cone) length
 - 3. Demonstrate understanding of radiation physics:
 - a. primary radiation.
 - b. scattered (secondary) radiation.
 - 4. Describe protocol for suspected x-ray machine malfunctions.

- B. Practice patient safety measures to provide protection from x-radiation.
 - 1. Identify major causes of unnecessary x-radiation exposure.
 - 2. Demonstrate understanding of radiation biology.
 - a. Short- and long-term effects of x-radiation on cells and tissues.
 - b. Demonstrate understanding of concepts of locally absorbed radiation doses, effective dose, and latent period.
 - 3. Identify ways to reduce radiation exposure to patients (ALARA).
 - 4. Identify guidelines that determine frequency of exposure.

(12%) V. RADIATION SAFETY - OPERATOR

- A. Practice operator safety measures to provide protection from x-radiation.
 - 1. Identify sources of x-radiation to operators while exposing radiographs.
 - 2. Identify safety measures to reduce operator x-ray exposure.
 - 3. Demonstrate understanding of radiation physics and biology pertaining to the operator exposure.

- B. Describe techniques for monitoring individual radiation exposure.
 - 1. Describe the ALARA principle as related to operator safety.
 - 2. Explain the function of a personal monitoring device.

Infection Control (ICE[®]) Detailed Content Outline

(10%) I. PATIENT AND DENTAL HEALTHCARE WORKER EDUCATION

- A. Demonstrate an understanding of infectious diseases and their relationship to patient safety and occupational risk.
- B. Explain and clarify the procedures and services being delivered and their consequences to the patient, family, other patients, and dental healthcare personnel.
- C. Demonstrate understanding of the need for immunization against infectious diseases, such as hepatitis B.

(20%) II. PREVENT CROSS-CONTAMINATION AND DISEASE TRANSMISSION IN ALL AREAS OF THE DENTAL OFFICE AND COMMERCIAL LABORATORIES.

- A. Perform proper handwashing.
- B. Use disposable items whenever possible.
- C. Protect the patient and operator through the use of barrier techniques, including masks, gloves, protective eyewear, clinic attire, dental dam, and other safety items.

(10%) III. MAINTAIN ASEPTIC CONDITIONS.

- A. Identify the modes of disease transmission.
- B. Properly dispose of biohazardous and other waste generated in the dental office.
- C. Properly store all instruments.

(15%) IV. PERFORM STERILIZATION PROCEDURES.

- A. Prepare dental instruments and equipment for sterilization.
- B. Use the appropriate method for sterilization of dental instruments, equipment and supplies.
- C. Use the appropriate system for monitoring, sterilization of dental instruments, equipment and supplies.

(15%) V. ENVIRONMENTAL ASEPSIS.

- A. Prepare surfaces for disinfection.
- B. Use the proper method of disinfection for the treatment room, laboratory, darkroom, instrument processing and equipment.
- C. Prepare and use chemical agents according to manufacturer's instructions.
- D. Environmental protective barriers.

(30%) V. OCCUPATIONAL SAFETY

- A. Follow the standards and guidelines of occupational safety for dental office personnel, including the following:
 - 1. Follow regulations described in the OSHA Bloodborne Pathogens Standard.
 - 2. Follow regulations described in the OSHA Hazard Communication Standard.
 - 3. Perform appropriate first aid procedures, document and report all incidents, such as cuts/punctures from instruments, needle sticks, or acid burns as described in the OSHA General Work Place Standard.
 - 4. Needle stick and sharps injury prevention standards.

- B. Incorporate all safety measures when using chemical and physical hazards, such as, but not limited to:
 - 1. mercury.
 - 2. nitrous oxide.
 - 3. caustic agents and other chemicals.
 - 4. airborne particles and contaminants.
 - 5. bonding materials.
 - 6. curing light.
 - 7. lasers.
 - 8. latex.
 - 9. excessive heat.

- C. Maintain and document a quality assurance (quality improvement) program for infection control throughout the dental office.

General Chairside (GC®) Detailed Content Outline

(10%) I. COLLECTION AND RECORDING OF CLINICAL DATA

- A. Demonstrate understanding of basic oral and dental anatomy and physiology
 - 1. bones
 - 2. muscles
 - 3. glands
 - 4. nerves
 - 5. blood vessels
 - 6. teeth
 - 7. oral cavity
 - 8. others

- B. Preliminary Exam
 - 1. Record the purpose of patient's visit and/or chief complaint.
 - 2. Assess patient's general physical condition, including skin, gait, etc., and note any abnormal characteristics, including evidence of eating disorders, substance abuse or physical abuse, and age-related changes.
 - 3. Identify and locate the morphologic types of teeth in the primary and permanent dentition.
 - 4. Identify the surfaces of the tooth.
 - 5. Identify, describe and note any abnormal findings in the head and neck (TMJ) region, including:
 - a. oral manifestations of systemic diseases/conditions.
 - b. periodontal/diseases and conditions of mucosa (cleft plate, etc.).
 - c. oral pathologic conditions.

- C. Charting
 - 1. Identify the permanent and primary teeth according to the Universal Numbering System.
 - 2. Chart conditions in the patient's oral cavity and accurately transcribe the record and other numbering systems.
 - a. Observe/record suspected carious lesions (cavity classifications).
 - b. Existing conditions, e.g., restorations, impaction, missing teeth.
 - c. Chart periodontal conditions, including mobility, furcation involvement and pocket depth.
 - d. Existing endodontics and periapical pathology.

- D. Diagnostic Aids
 - 1. Prepare for and assist with the collection of diagnostic data, such as radiographs, pulp tests, photographs, and occlusal registrations.
 - 2. Take and pour impressions for diagnostic study casts.
- E. Treatment Documentation
 - 1. Record treatment and prescriptions (e.g., medication, instructions) on patient's chart.
 - 2. Recognize present treatment and/or medication.
 - 3. Record recommended treatment and patient's acceptance or refusal of recommendation.
 - 4. Record patient's compliance.
- F. Vital Signs
 - 1. Take and record pulse rate and description.
 - 2. Observe and record respiration rate.
 - 3. Measure and record blood pressure.
 - 4. Take and record temperature.

(45%) II. CHAIRSIDE DENTAL PROCEDURES

- A. Four-Handed Dentistry Techniques
 - 1. Prepare the treatment room to receive and treat the patient.
 - 2. Prepare appropriate treatment trays with armamentarium in sequence of use and delivery position.
 - 3. Seat and prepare patient; position and adjust equipment.
 - 4. Implement four-handed dentistry concepts in all treatment procedures.
 - a. Assume correct positions (Fulcrum).
 - b. Perform instrument transfers.
 - c. Maintain access and visibility of treatment procedures.
- B. Selection and Preparation of Armamentarium
 - 1. Select, prepare, and/or modify impression trays for appropriate uses.
 - 2. Prepare carpule hypodermic syringes for injection.
 - 3. Select and prepare tray set-ups and all necessary armamentaria for general dentistry and dental emergency procedures, including:
 - a. anesthetics.
 - b. amalgam restorations.
 - c. bleaching.
 - d. composite restorations.
 - e. crown and bridge preparation.
 - f. crown and bridge cementation.
 - g. desensitization of the teeth.
 - h. endodontic therapy.

- i. extractions.
- j. removable partial or full denture
- k. fluoride application.
- l. immediate dentures.
- m. impactions
- n. incision and drainage.
- o. initial/secondary impressions.
- p. interceptive orthodontics.
- q. occlusal equilibration/adjustment.
- r. oral examination.
- s. oral prophylaxis.
- t. periodontal procedures.
- u. periodontal surgical dressing placement.
- v. periodontal surgical dressing removal.
- w. prosthetic implants.
- x. root planing and curettage.
- y. dental dam applications.
- z. sealant application.
- aa. stainless steel crown placement.
- bb. stainless steel crown removal.
- cc. suture placement.
- dd. suture removal.
- ee. temporary cementation.
- ff. temporary restoration.
- gg. treatment of dry socket.
- hh. rotary instruments.

C. Perform or Assist with Intraoral Procedures

1. Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, etc.
2. Place and remove cotton rolls.
3. Assist with and/or polish teeth.
4. Assist with and/or apply topical fluoride.
5. Assist with and/or perform a vitality test.
6. Assist with and/or control minor bleeding after any surgical procedure.
7. Assist with, place, and/or remove temporary cement.
8. Assist with and/or remove excess cement from the coronal surfaces of teeth, restorations, and appliances.
9. Assist with and/or apply and remove the dental dam.
10. Prepare, assist with, and/or apply and remove matrix bands.
11. Assist with and/or apply topical anesthetic to site of injection.
12. Assist with and/or monitor the administration of nitrous oxide/oxygen analgesia.

13. Identify and exchange rotary instruments in dental handpieces.
14. Using the concepts of four-handed dentistry, assist with general dentistry and dental emergency procedures, including:
 - a. administration of anesthetics.
 - b. cavity preparation and restoration (polish amalgam).
 - c. crown and bridge restoration preparation (retraction cord), temporization, and cementation.
 - d. desensitization of the teeth.
 - e. endodontic therapy.
 - f. extractions and impactions.
 - g. fabrication of removable partial or full dentures.
 - h. fluoride application.
 - i. occlusal equilibration/adjustment.
 - j. occlusal registration.
 - k. oral examination and data collection.
 - l. oral prophylaxis.
 - m. periodontal procedures.
 - n. placement of sealants.
 - o. placement of stainless steel crowns.
 - p. peri-operative treatment and complications.
 - q. prosthetic implants and grafts.
 - r. suture placement and removal.
 - s. taking impressions.

D. Patient Management

1. Demonstrate ability to calm and reassure apprehensive patients.
2. Deal with all types of patients, including patients with special needs and problems.
 - a. Employ the principles of patient management during routine clinical procedures.
3. Monitor and record patient's response to drugs/medications.

(12%) III. CHAIRSIDE DENTAL MATERIALS (PREPARATION, MANIPULATION, APPLICATION)

A. Impression

1. Prepare, mix, deliver and store the following materials for impressions:
 - a. irreversible hydrocolloid (alginate).
 - b. reversible hydrocolloid.
 - c. elastomerics (polyether, polyvinylsiloxane).
 - d. waxes.

- B. Restorative
 - 1. Prepare, mix, deliver, and store restorative materials, including:
 - a. amalgam.
 - b. cements.
 - c. composites
 - d. dentin bonding materials.
 - e. glass ionomers.
 - f. temporary restorative materials.
 - g. varnishes, bases, and liners.
 - 2. Prepare and/or seat temporary crowns.

- C. Sedative/Palliative
 - 1. Prepare, mix, and store sedative/palliative materials, including:
 - a. periodontal surgical dressings.
 - b. post-extraction dressings.
 - c. sedative dressings.

- D. Other Dental Materials
 - 1. Select and manipulate the various finishing, polishing and cleaning agents.
 - 2. Prepare, mix, deliver and store other dental materials, including:
 - a. bleaching agents.
 - b. bonding agents.
 - c. endodontic materials.
 - d. etchants.
 - e. glass ionomer materials.
 - f. pit and fissure elements.

(5%) IV. LAB MATERIALS AND PROCEDURES

- A. Selection and Manipulation of Materials
 - 1. Select and manipulate the various gypsum products.
 - 2. Select and manipulate the various dental waxes.
 - 3. Select and manipulate the various acrylic products or acrylic substitutes.
 - 4. Properly store gypsum and acrylic products and dental waxes.

- B. Laboratory Procedures
 - 1. Fabricate and evaluate diagnostic casts, including trimming and finishing (mount with face bow).
 - 2. Debride and polish removable appliances and prostheses.
 - 3. Debride and polish fixed appliances and prostheses.
 - 4. Debride and polish complete/partial dentures.
 - 5. Fabricate custom impression trays, mouth/athletic guards, bleaching trays, acrylic temps, etc.

(8%) V. PATIENT EDUCATION AND ORAL HEALTH MANAGEMENT

A. Oral Health Information

1. Develop and implement patient dental health education presentations on topics such as:
 - a. functions of the primary and permanent teeth and the relationship of the supporting structures.
 - b. etiology of dental disease (e.g., caries, periodontal disease).
 - c. stages of the eruption and exfoliation of the teeth.
 - d. classifications and importance of occlusion.
 - e. functions of saliva.
 - f. advantages and disadvantages of various restorative materials or procedures.
 - g. effect of systemic disease on the healing process.
 - h. special dental health needs due to physical status, age, etc.
 - i. personal oral habits that may compromise general health.
2. Explain and clarify the procedures and services being delivered and their consequences to patient and/or family.
3. Explain to the patient the effects of all types of fluoride, the advantages of the various modalities of administration, and the dangers and results of overdose.

B. Pre/Post Treatment Instruction

1. Provide patient with oral and written pre- and post-treatment instructions, including instruction on prescribed medications.
2. Instruct the patient in how to care for removable and non-removable appliances and prostheses.

C. Plaque Control Techniques

1. Evaluate the patient's oral health care status and habits.
2. Provide preventive oral health care information to the patient based on individual needs.
3. Instruct the patient in appropriate toothbrush selection and brushing techniques.
4. Select and use plaque disclosing aids in patient education.
5. Select and use oral hygiene devices such as brushes, floss, interdental aids, oral rinses, and irrigating aids.
6. Evaluate the patient's progress in and response to homecare therapy.

D. Nutrition

1. Provide instruction and evaluate basic nutritional needs of individual patients as they relate to dental health.
2. Explain to the patient the relationship of carbohydrates to the development of dental caries.

(8%) VI. PREVENTION AND MANAGEMENT OF EMERGENCIES

A. Medical

1. Implement techniques for the prevention of medical emergencies in patients with past histories of conditions such as:
 - a. AIDS.
 - b. alcohol/substance abuse.
 - c. allergies.
 - d. angina pectoris.
 - e. arthritis or rheumatism.
 - f. asthma.
 - g. blood dyscrasias.
 - h. cancer.
 - i. cardiovascular disease.
 - j. diabetes mellitus or hypoglycemia.
 - k. emphysema.
 - l. epilepsy.
 - m. hepatitis.
 - n. hypertension or hypotension.
 - o. kidney or liver problems.
 - p. prostheses and heart valve replacements.
 - q. respiratory infection.
 - r. rheumatic fever or congenital heart disease.
 - s. ulcers.
 - t. venereal disease.
2. Recognize how medications affect the patient's dental treatment.
3. Demonstrate preventive measures to be used following drug administration to avoid drug-induced emergencies.
4. Recognize the signs and symptoms related to specific medical conditions/emergencies likely to occur in the dental office, including:
 - a. airway obstruction.
 - b. cardiovascular or cerebrovascular irregularities.
 - c. diabetes- or epilepsy-related incidents.
 - d. reactions to drugs, anesthetics.
 - e. respiratory irregularities, including hypo- or hyperventilation, asthma (apnea, anoxia).
 - f. shock.
 - g. syncope (fainting).
5. Respond to and assist in the management of chairside emergencies, such as:
 - a. allergic reactions.
 - b. blood loss.
 - c. cardiovascular or cerebrovascular irregularities.
 - d. emergencies produced by metabolic or neurologic disease.

- e. respiratory irregularities, obstructions.
 - f. shock.
 - g. transient unconsciousness.
 - 6. Assemble and maintain appropriate emergency supplies, drugs, and equipment.
 - a. Recognize the uses of drugs in the prevention and/or effective management of an emergency.
 - 7. Prepare and post a listing of emergency support personnel (ambulance, fire department, emergency squad, hospital, physician in building, etc.).
- B. Dental
- 1. Recognize the signs and symptoms related to specific dental conditions/emergencies likely to occur in the office.
 - a. Recognize the types of soft tissue inflammations of the oral cavity.
 - 2. Implement and/or assist with appropriate procedures for the management of dental emergencies.

(5%) VII. OFFICE OPERATIONS

- A. Supply and Inventory Control
- 1. Maintain and control supplies.
 - a. Record and inventory items used.
 - b. Order supplies, instruments and equipment to maintain specified levels.
 - c. Rotate expendable supplies according to the expiration date.
 - d. Rotate non-expendable supplies according to the inventory control system.
 - e. Manage backorders according to the inventory control system.
 - 2. Maintain security and necessary records of controlled substances.
- B. Maintenance of Equipment/Instruments
- 1. Perform preventive maintenance on the equipment and instruments in the dental operatory, as per manufacturers' instructions.
 - 2. Provide appropriate care and storage of supplies such as sterile disposable products, nitrous oxide, oxygen, etc.
 - 3. Sharpen hand cutting instruments by both manual and mechanical methods.
- C. Patient Reception, Communication, and Accounting
- 1. Communicate effectively and establish good working relationships with patients and with other members of the dental care team.
 - 2. Receive and dismiss patients and visitors.
 - 3. Become familiar with the appointment control process.
 - 4. Explain fees charged to a patient as directed by the dentist.

5. Understand basic concepts of third-party payment.
6. Initiate referral procedures for the patient as directed.
7. Become familiar with computers as used in the dental office.

D. Legal Aspects of Dentistry

1. Records

- a. Identify the legal significance of medical and dental histories.
- b. Identify items included as part of a legally documented patient record.
- c. Implement precautions necessary in lending records to another dental office.
- d. Differentiate among the various types of patient data in the dental office.
- e. File items, including radiographs, histories, correspondence, etc., into individual patient records.
- f. Record patient telephone communication and professional dental and medical consultations.

2. Legal Responsibilities and Regulations

- a. Identify the factors and precautions necessary to prevent lawsuits against dental personnel (risk management).
- b. Identify the responsibilities and/or obligations of the dentist and patients in the dentist-patient relationship.
- c. Obtain consent for routine and emergency office dental care.
- d. Maintain the patient's right to privacy (HIPAA).
- e. Identify the action that a dental assistant should take after a threat to sue for malpractice.
- f. Recognize the legal responsibilities of the dental assistant in relation to the State Dental Practice Act.
- g. Document any patient refusal of recommended routine and emergency treatment.
- h. Be aware of updates in Occupational Safety and Health Administration (OSHA) and Centers for Disease Control and Prevention (CDC) guidelines, and maintain office compliance.